

AMERICAN NURSERYMAN

The Nurseryman's Forte: To Make America More Beautiful and Fruitful

JANUARY 15, 1957



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SEEDS TREE—SHRUB—PERENNIAL
FLOWER—GRASS—VEGETABLE

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Barberry mentorensis	Per 100	Lilac, vulgaris, Common Purple	Per 100
15 to 18 ins., heavy	\$ 50.00	2 to 3 ft.	\$ 45.00
18 to 24 ins., heavy	65.00	3 to 4 ft.	65.00
2 to 2½ ft., heavy	80.00	Physocarpus opulifolius	
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2 to 2½ ft., heavy	45.00	2 to 3 ft.	45.00
Barberry thunbergi atropurpurea		Physocarpus opulifolius nanus	
18 to 24 ins., heavy	50.00	2 to 3 ft.	45.00
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Cotoneaster divaricata		3 to 4 ft., 4 canes and up	22.50
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2 to 3 ft.	85.00	Privet, California	
Cydonia (chaenomeles)		2 to 3 ft., 4 canes and up	14.00
japonica, 2 to 3 ft., cutting-grown	45.00	Privet, ibolium	
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Elder (sambucus)		Privet, regelianum	
American golden, 3 to 4 ft., cutting-grown	60.00	18 to 24 ins., cutting-grown	35.00
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3 to 4 ft.	70.00	2 to 3 ft.	55.00
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		Viburnum molle	
		2 to 3 ft.	50.00
		Weigela Eva Rathke	
		2 to 3 ft.	\$50.00
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		2 to 3 ft.	50.00
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The Nurseryman's Forte: To Make America More Beautiful and Fruitful

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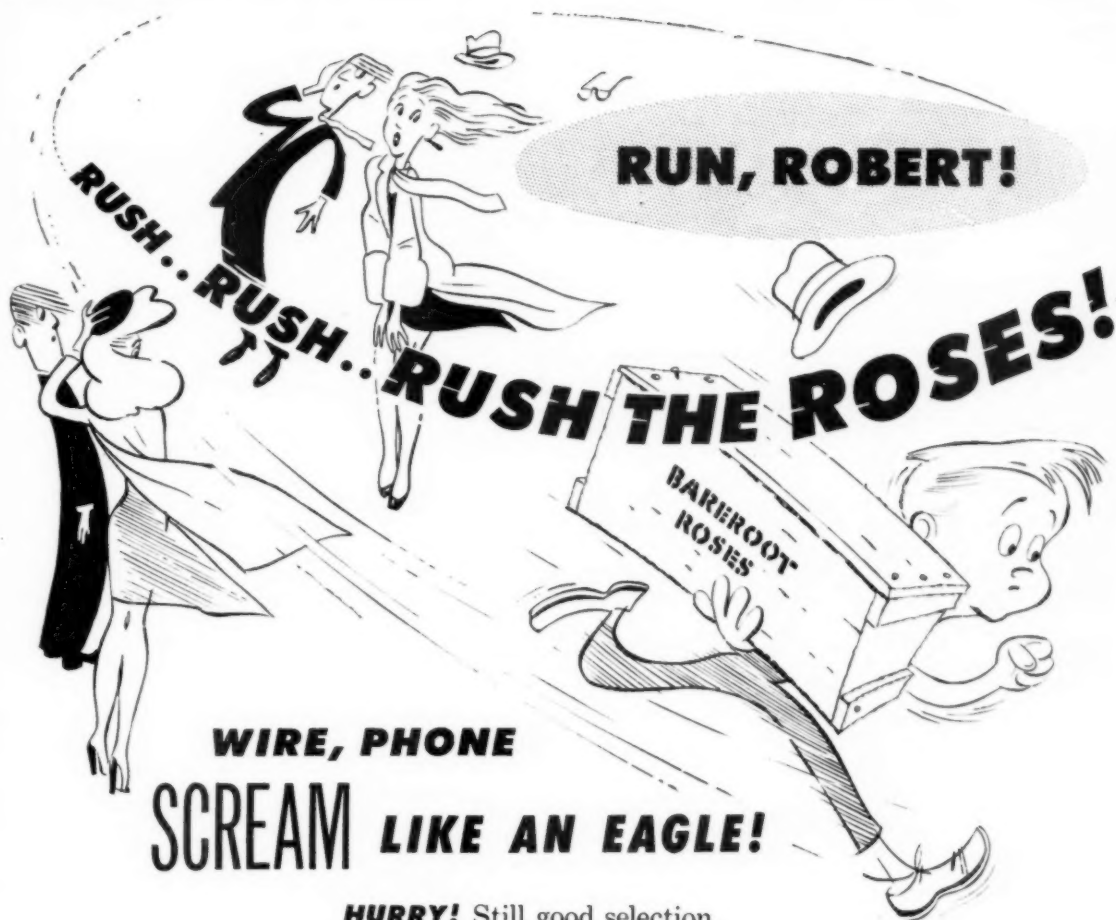
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Forms for the February 1 issue will close Friday, January 11.

Forms for the February 15 issue will close Friday, January 25.

Mail copy to arrive at Chicago by these dates—no later!



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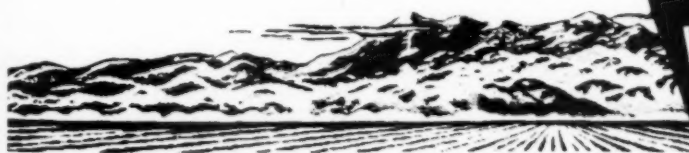
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AMERICAN NURSERYMAN

F. R. KILNER
Editor and Publisher

FRED H. KILNER
Managing Editor

C. A. BRADY, Jr.
Advertising Manager

Editorial

PREPARATION FOR SPRING

When the wholesaler's salesman calls, the retail nurseryman sits down—if he has not done so before—to estimate what items of stock and the quantities he will need for spring sales. He will calculate what he will feature, what items he will drop, what new things he may stock and how many of each of the staples he is likely to sell. His records of last year, the calendar, his changing clientele and other factors all are considered. So he buys his supply of stock.

But does he sit down with his advertising man or merchandising counselor, or even by himself, and figure out a program of selling for the season? Does he plan his advertising for the season, his displays of merchandise, his headlines from week to week, according to the calendar, with due allowance for weather conditions?

Or does he leave his selling to chance or to guess, in a catch-as-catch-can style, making his decisions when the season is on him, hurriedly and not always soundly?

Now is the time to plan both buying and selling well and wisely.

SELF-SERVICE

Self-service has become an important innovation in many mercantile fields, including garden shops. The public not only has become accustomed to it, but even prefers it to delays otherwise encountered. In some large department stores during the preholiday rush, queries were heard why clerks or cashiers could not be provided to wrap and receive payments for those customers who selected merchandise immediately and did not wish to wait while salespersons spent an interminable time on other customers who demanded to see almost the entire stock. In fact, some stores adopted measures to relieve such congestion, but in no large way.

In providing self-service one does

well to remember its adoption should be for the better satisfaction of the customers, not just to save money for the merchant. A few types of stores, like groceries, can get along without salesmen, using only checkers or cashiers, but in the retail nursery or garden shop someone must advise, explain and suggest if maximum sales are to be attained, through the satisfaction of customers' wants.

Most of the housewives who visit the supermarkets have lists of their household needs down to the brand names and have little desire for help in making selections from the shelves. But the average gardener seldom has well-defined purchases in mind; he is often in search of ideas as much as he is for plants. Not only the amount of his purchases but also his satisfaction depends on the guidance given him by the nursery or garden center salesman. The latter cannot be too well informed or too attentive to the plant buyer, while the man who wants a can of insecticide or a few more geraniums can do very well with self-service and is glad to do his errand quickly.

TRIMMING HEDGES

Repeatedly one hears or reads that a hedge should be trimmed narrower at the top than at the bottom and that a rounded top is to be preferred to a flat or square top. But most of the hedges one sees are trimmed flat at the top and little on the sides, so that in time they are like tables or benches of green supported by brown, twiggy masses or stems below.

Where there is room and plants have been so trimmed from the start, there is no hedge more attractive than one rounded so that it is almost semicircular in form. This is true of privet as well as evergreens.

Why, then, are almost all hedges trimmed in the square style, contrary to recommendations, when they would grow better and look better if trimmed so as to allow the bottom portions to have access to the light and to produce a green covering to the base? Is it because of ignorance or because hedge trimmers, be they the amateur owner or professional (?) maintenance men, want only to get the job done easily and quickly? Assuming that most hedges are trimmed by the owners or by odd-jobs men equally untrained for the work, yet there should be enough hedges given attention by the experts so that one might expect a

larger percentage than one sees trimmed in the desirable manner. Were there more of these men, if only a few, the example might set others to trim hedges in better forms.

If there are good reasons for hedges to be trimmed as they usually are, flat or square, the practitioners in the field would do the rest of us a benefit by explaining why. Letters from readers on this topic might prove enlightening.

COMPETITION AHEAD

While the continued high level of home building seems likely to provide nurserymen with ample business in the year ahead, the competition for the home buyers' dollars will be sharper in the form of advertising by manufacturers and suppliers of home appliances, furnishings and the like.

Advertising budgets in 1957 will increase at least 10 per cent over 1956, with some advertisers planning to spend as much as 50 per cent more, a survey by Printers' Ink magazine showed.

The magazine polled 100 major companies that advertise nationally. It found 71 planning to spend from 3 to 50 per cent more than in 1956. Seventeen reported no changes planned, and 12 said their budgets would be lower.

Chief factors besides rising advertising rates, said the magazine, are growing competition, expanding markets and new products.

"Many advertisers are automatically hiking their promotion dollars enough to cover rising advertising costs, then adding new money on top of that," it said.

The publication also reported that national advertising in October ran 1 per cent higher than in September and 11 per cent above October, 1955.

GIFT SUBSCRIPTIONS

When subscribers to the American Nurseryman send in gift subscriptions to this magazine for an employee or a fellow nurseryman, it is necessary that information be provided as to this person's trade connection. If for a fellow nurseryman, information concerning his business should be included for our records. Providing this information with your remittance will facilitate entering of the subscription promptly and require no further correspondence.

The home choice ornamental areas, this f than arbor point adapt plant plant Barn ent o prove too-n forest tionat gets. The diseas elms is enc jolt, c his ci narrow belts where with herite phant health nance

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Progress Toward Better Trees

By J. Gerling

Rochester Park Department, Rochester, N. Y.

The past few years have brought home the fact that a more discerning choice of trees, both functional and ornamental, is required in urban areas. Conditions which now make this fact obvious were foreseen more than 30 years ago by at least one arborist who did splendid work in pointing the way toward better adapted, more easily maintained plantings. Today, the test and sample plantings of street trees made by Barney Slavin, retired superintendent of parks, Rochester, N. Y., have proved far more practical than the too-numerous street plantings of forest giants, which take a disproportionate bite out of city foresters' budgets.

The first symptoms of Dutch elm disease on a city street, where mature elms often stand only 25 feet apart, is enough to give any city forester a jolt, especially when he knows that his city has miles of such plantings on narrow streets with too-narrow tree belts and shallow building setbacks, where the treetops are interlaced with utility lines. He has certainly inherited a costly bunch of green elephants, which, even when in good health, promise an expensive maintenance chore.

Toward Discrimination

It is not difficult to understand the reasons for such widespread use of the large, fast-growing species that characterized the activities of planters for so many years. Poplars, elms,

planes and soft maples are easily propagated, attain size rapidly and are tolerant of a wide range of growing conditions. They give quick service where shade and wind protection are wanted. While it is true that, in many areas, there are priceless plantings of these trees, they often involve expensive maintenance. Many progressive arborists are attempting a more discriminate selection by inducing all planters, whether municipal department heads or homeowners, to use better-adapted species and forms and by encouraging nurserymen to supply a wider choice of desirable trees. It is the purpose of this article to summarize what progress has been made in this project.

Unfortunately, the early work by Barney Slavin during his half century of endeavor with the Rochester park bureau, was curtailed by conditions beyond his control. Many streets in Rochester, however, now show the soundness of his selections of proved species and clones more practical for city street embellishment than the huge types then in vogue. Today, under the able direction of the city's park department head, a comprehensive, forward-looking street-tree program, incorporating Mr. Slavin's ideas, is being followed. Though of proved worth, Mr. Slavin's work in Rochester was not publicized and was little-noted elsewhere.

Information at hand regarding



Acer platanoides erectum Slavin, upright Norway maple, is columnar in maturity. This form is excellent where formality is wanted in limited areas.

modernized street planting programs, together with observations and experiences of this writer over the past 15 years, are gratifying. In 1941, a 2-part article was published in *Trees* magazine which described Mr. Slavin's work at Rochester and was illustrated with pictures of some of his street plantings. Only three letters were received by this author from men interested enough to write after reading the material. However, in response to three articles advocating a better supply of more satisfactory species published in the *American Nurseryman* and the *Garden Journal* during the past two years, over 200 inquiries from enthusiastic readers were received. This increase in interest embraces not only nurserymen, park men and city foresters, but homeowners as well, and is compensation for those whose persistent efforts were responsible.

It is never a simple matter to effect any sudden change from long-established procedures. Most persons concerned were accustomed to, and took for granted, the problems and expensive care incidental to living with age-debilitated, oversize trees and were reluctant to worry much about the future. It was, perhaps, the alarming impact of fast-spreading Dutch elm disease which, more

[Continued on page 95]



Street planting of *Ulmus americana ascendens* Slavin. Vegetative propagation of good clones assures more uniform growth habit. These upright elms are not only ideal for use on narrow streets, where the species type would prove an eventual nuisance, but are much less likely to suffer crippling storm damage.

Large Trees for Indiana

By H. W. Gilbert

Purdue University, Lafayette, Ind.

Large-growing deciduous trees are necessary to perform in several situations. They are useful on the large home grounds and in limited numbers down to a single tree on most small home grounds. They are used extensively in parks, public grounds and street plantings and on farmsteads.

The selection of trees for such plantings should be determined by the evaluation of many factors and conditions. First, the tree should be hardy in respect to climate. Any selection should be within the reasonable ability of an individual or of society to control insects and diseases. In choosing trees to plant, we can make use of the facts of the present day. There is no positive assurance that any given kind of tree will not be a poor risk 25 years from now. The American elm has proved to be a liability in the midwest in some instances, but trees must be planted to replace them and to improve other situations. There seems to be general agreement to continue planting oaks in spite of oak wilt, if planting distances are adequate to prevent root grafting.

Large trees should be planted ac-

cording to the kind, size and distance away from existing trees on the property concerned and trees on the property which adjoins it. Sometimes a large tree is growing so close to the desired planting location that the performance of another large tree after planting will not be desirable.

Affecting Factors

Our trees should be selected and planted when best adapted to a number of other factors. Such things as street width; size and shape of buildings or other structures; compatibility with small trees, shrubs and grass; compatibility with public utility structures; soil composition; third-dimension qualities to be used for landscape design; atmospheric conditions; the protection of adjacent cropland, and containing the tree within the boundaries of the property are factors that most frequently need evaluation.

When the inventory of existing conditions is completed and then combined with a similar inventory of the desired results, then the selection is based on calculated reason and may suggest what is needed to do the job best—replacing selection

merely on the basis of personal desires. A tree may meet the requirements of one situation and be a poor selection for another.

Variety of Types Desirable

One kind of tree is often used predominantly through a town along the streets. The same thing sometimes occurs in neighborhood plantings. The variability of the factors mentioned, including street widths and architectural forms, when observed in tree selection, will result in a variety of trees' being used in a town or city. The insect and disease problem, resulting in the great losses of American elms, also is evidence of the merits of replacing and planting with a variety of trees rather than one kind.

Poor performance of trees is not due alone to their own characteristics, environment or susceptibility to destructive insects or diseases. The actions or the lack of good judgment of man is a problem that contributes to poor trees about as much as all other causes. Too close planting and the resultant beheading, followed with heart rot and wind damage, are

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SOME LARGE DECIDUOUS TREES FOR INDIANA

Common Name	Botanical Name	Texture	Shape	Spread (in Feet)	Height (in Indiana)
Tulip tree, tulip poplar	<i>Liriodendron tulipifera</i>	Coarse	Oval	65 to 75	75 to 100
Cucumber tree	<i>Magnolia acuminata</i>	Coarse	Oval—picturesque in old age	50 to 60	80 to 100
American sycamore	<i>Platanus occidentalis</i>	Coarse	Spreading	60 to 100	75 to 100
London plane tree	<i>Platanus acerifolia</i>	Coarse	Spreading	60 to 75	75 to 100
European plane tree	<i>Platanus orientalis</i>	Coarse	Spreading	50 to 70	60 to 80
Hackberry	<i>Celtis occidentalis</i>	Medium	Spreading	60 to 80	60 to 90
Moraine thornless honey locust	<i>Gleditsia triacanthos inermis Moraine</i>	Fine	Spreading	60 to 80	70 to 90
White oak	<i>Quercus alba</i>	Coarse	Spreading	60 to 100	75 to 100
Red oak	<i>Quercus rubra</i>	Coarse	Oval to round	40 to 60	60 to 80
Scarlet oak	<i>Quercus coccinea</i>	Coarse	Spreading	50 to 80	60 to 80
Pin oak	<i>Quercus palustris</i>	Medium	Conical in youth— to oval to round	50 to 70	60 to 80
Shingle oak	<i>Quercus imbricaria</i>	Medium	Conical in youth	50 to 70	60 to 80
White ash	<i>Fraxinus americana</i>	Medium	Oval to spreading	60 to 80	70 to 90
Green ash	<i>Fraxinus lanceolata</i>	Medium	Spreading	40 to 60	60 to 80
Sugar maple	<i>Acer saccharum</i>	Medium	Oval	50 to 70	60 to 80
Red maple	<i>Acer rubrum</i>	Medium	Spreading	50 to 80	60 to 100
Kentucky coffee tree	<i>Gymnocladus dioica</i>	Fine—coarse in winter	Oval	40 to 50	60 to 100
American beech	<i>Fagus americana</i>	Fine	Round—spreading	50 to 120	75 to 100
Sweet gum	<i>Liquidambar styraciflua</i>	Medium	Conical in youth	40 to 50	50 to 75
Silver linden	<i>Tilia tomentosa</i>	Medium	Oval	40 to 50	70 to 100

MEDIUM-SIZE TREES

Small-leaved linden	<i>Tilia cordata</i>	Medium	Oval	30 to 40	50 to 60
Norway maple	<i>Acer platanoides</i>	Coarse	Round to spreading	60 to 70	40 to 60
Sassafras	<i>Sassafras variifolium</i>	Coarse to medium	Oval to picturesque	30 to 40	30 to 60
Yellowwood	<i>Cladrastis lutea</i>	Medium—graceful	Round—spreading	30 to 40	40 to 50
Horse chestnut	<i>Aesculus hippocastanum</i>	Coarse	Oval	30 to 40	40 to 60
Ohio buckeye	<i>Aesculus glabra</i>	Coarse	Oval	30 to 40	40 to 50
Persimmon (southern Ind.)	<i>Diospyros virginiana</i>	Medium	Oval to irregular	30 to 60	25 to 40
European white birch	<i>Betula alba</i>	Fine	Rounded	30 to 40	40 to 50

Tips for Better Landscapes

Planting of Entrances

By Clarence E. Lewis

Long Island Agricultural and Technical Institute, L. I., N. Y.



Illustration A—Small trees, particularly clump-growers, are usable by rear doors to hold one's attention.

Back doors, side doors, front doors, whatever they may be, all are used for entrances or exits—and sometimes as places to pass the time of day. The front door is usually well planted to make a home as appealing as the house next door or the one across the street. It is the key area and must be planted neatly, effectively and invitingly, to please the visitor and the passer-by as well as the family. The side or rear entrance is for the people who live in the home and become a part of the family's everyday living.

Hedges and clipped specimens are not suited to the informality of a back entrance except where the surrounding details are highly formal. There should be something friendly about the planting in such an area—something that expresses the personality of the family that lives there. You may ask how one interprets a family personality and whether everyone is capable of doing it. You

learn the interests, hobbies and preferences of a man and his wife by talking with them in their home, not over an office desk. Sometimes an interview can be held on the rear terrace, but try to go inside the home so that you may better understand how your client lives. Things appear different from the inside looking out. You can never fully put yourself in the place of the homeowner, but you can know more about him than you learn in an office conference.

There are neighbors, too, whose back yards are always open to one another. Under such conditions the doorways might be decorated to hold interest for both homeowners. Do not discourage neighborliness by using hedges and screens. Trees are more fitting.

Brick Walks

Instead of using the traditional concrete walk and step leading into the home, it may often be a good

idea to employ bricks—old bricks rather than new ones. Old or used bricks are often more in keeping with colonial, Cape Cod and other period architecture.

Try designs in the brick walks and avoid the usual straight lines. It does not take a great imagination to form a different pattern—possibly a few more bricks will accomplish the change. Flagstones can be made interesting, also, and in some landscapes can be combined with old brick with pleasing results. The average homeowner is not usually so interested in wood rounds as he is in firmer surfaces. Oftentimes a wrought-iron railing is in place at the rear entrance, and of course it should have some artistic appeal. This may be advantageous to the owner whose home faces south and whose back entrance is in shade most of the day. There the railing serves as a safety device. During the winter the shaded

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Illustration B—Window boxes can be planted to tie in with surroundings or link indoors and outdoors.

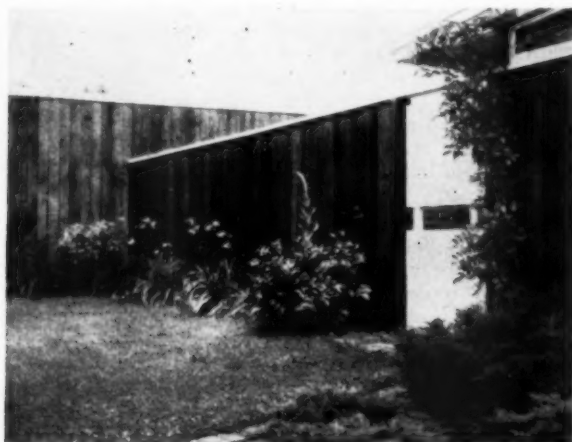


Illustration C—Some rear areas can be planted with a variety of material that reflects a field-grown atmosphere.

Antibiotics in Plant Disease Control

By Dr. A. B. Hatch

Diseases of shade trees in the United States cause damages which have been estimated recently at approximately \$66,000,000 annually. Disease losses for agriculture as a whole, including damage to crops en route to the consumer, total more than \$3,000,000,000 annually. This enormous economic drain occurs primarily because conventional disease-controlling agents are only about 50 per cent effective in the tasks required of them. It follows that opportunities for reducing such losses by turning up new and more effective control agents are legion.

Antibiotics have already profoundly altered the course of human disease, and it is not unreasonable to assume that they may have a similar destiny in the plant kingdom. Unhappily, no one today is in the fortunate position of being able to say positively that this will come true. The reason is quite simple; sufficient effort has not yet been focused on the problem in plants to permit a final answer.

Research Tempo Changing

At first glance this may be surprising, especially as it is well known that antibiotics, even those that have been selected entirely through medical screening programs, are as effective in destroying plant pathogens in the test tube as they are in destroying human pathogens. It should be emphasized that no other medical development in history ever progressed so rapidly and with such urgency as did the use of antibiotics, and the high initial costs of manufacturing these agents had no effect on progress. Their exploration in agriculture, on the other hand, has progressed at a more leisurely and normal rate, and this rate was markedly retarded (1) by the initial high costs of antibiotics, (2) for a long time by their scarcity and (3) by lack of a good *in vivo* fungicidal antibiotic capable of destroying the wide range of fungal pathogens which attack plants.

The tempo of research activity and field testing, however, has markedly increased during the past two years. It is reported, for example, that the antibiotic formulation of one manufacturer had been

field tested on a single disease in 40 states and provinces on a total of over 100,000 trees prior to the 1955 season.

I do not propose to review the whole literature of plant disease control by antibiotics. This task was well done recently at the first international conference on uses of antibiotics in agriculture by Dr. W. J. Zaumeyer, of the United States Department of Agriculture. Rather, I shall choose only those experiences which I believe may have special interest to arborists and nurserymen.

I believe the quickest orientation can be provided by telling something about the five commercial antibiotic formulations which had reached the market for use as sprays and dusts by 1955.

Four of the five formulations are primarily antibacterial agents and contain as their only or primary ingredient crude streptomycin as sulphate or nitrate salts. Of these Squibb's Phytomycin, Lederle's Acco-Streptomycin and Merck's

Agri-Strep contain only streptomycin salts, while the fourth, Pfizer's Agri-mycin 100, also contains terramycin. Inclusion of the latter ingredient is reported to counteract development of resistant organisms.

Diseases Affected

Among the diseases for which these formulations are recommended are fire blight in apples and pears, blight in walnuts, wildfire and blue mold of tobacco, soft rot and black-leg of potatoes and bacterial spot of tomatoes and peppers. You will recognize that these are diseases which have yielded poorly to control by conventional agents. A multitude of other diseases are under study, including bacterial spot of peach and a number of wilts and bacterial blights of ornamental plants, which will be of special interest when the results become known.

A few details of the work reported on fruit and nut tree diseases with streptomycin-containing formulations may be of interest. "Fire blight of apples and pears caused by *Erwinia amylovora* was the first bacterial disease of an orchard crop to be effectively controlled with an antibiotic under commercial conditions," stated Dr. Zaumeyer. These sprays have drastically reduced fire blight on pears and apples wherever they have been tried.

Arkansas also reported control of walnut blight caused by *Xanthomonas juglandis* with two sprays of streptomycin sulphate at 10 parts per million.

Seedling peach trees under greenhouse conditions were protected from the blast disease of stone fruits caused by *Pseudomonas syringae* with streptomycin sprays in New Zealand.

Streptomycin Most Effective Agent

It is rather surprising that the antibiotic which has proved to be much the most effective in controlling plant diseases is crude streptomycin.

I believe you know that streptomycin in purified form achieved its greatest fame and won the Nobel prize for its discoverer, Dr. Selman A. Waksman, as the first reasonably curative agent against tuberculosis. Its lesser victories are confined principally to urinary infections by gram negative bacteria. It is, therefore, by no means as widely used in

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VIRGINIA SECRETARY



Charles L. Otey, Chester, Va., secretary-treasurer of the Virginia Nurserymen's Association, is a native of Virginia and was born in Petersburg.

After serving with the armed forces in the United States and Europe during World War II, Mr. Otey was employed by Southside Nurseries, Richmond, Va. He has studied nursery and landscape supervision.

He is a former secretary of the Chesterfield Kiwanis Club and is a member of St. Johns Episcopal church, Chester. Mr. Otey and his wife, Frances, have two daughters, Fran and Mary Lambeth.

Talk delivered by Dr. A. B. Hatch, Bristol Laboratories, Syracuse, N. Y., at a meeting of the New York State Arborists Association.

Western Sand Cherry as a Hedge

By Robert F. Carlson

Michigan State University, East Lansing, Mich.

For several years selections of western sand cherry, *Prunus besseyi*, have been tested as dwarfing rootstock for peach and plum varieties at East Lansing, Mich. In the course of these tests, observations of selected strains of the sand cherry have been made which suggest the usefulness of this plant in landscape plantings and where a dwarf ornamental hedge is desired.

The western sand cherry and selections of it have been described by Hanson and Hedrick (Ref. 1 and 2). The material here described, however, constitutes clonal selections of the sand cherry and, accordingly, requires special comments.

The growth habit of this selection is bushy, with branches spreading at the base and then with upright growth a few inches from the base. An occasional plant will vary from this growth habit in being more upright while other plants may exhibit a dwarfer growth; however, proper pruning eliminates this visual difference. Plants are hardy and slow growing, but will reach three to four feet in height after four to six years.

The leaves are lanceolate, one-half to five-eighths inches wide and two to three inches long, with a silvery gray green color in the summer, turning to various shades of red and purple in autumn. The leaves remain on the branches well into November under Michigan climatic conditions. The small white flowers, one-fourth to three-eighths inch in diameter, unfold in early May at the same time the foliage is expanding. Flowers remain on the plants for 10 to 14 days. The fruit is shiny black purple when ripe and about one-half inch in diameter. The pit is large in proportion to the fruit size. The fruit has a tart astringent flavor and is useful for preserves. If not removed, fruit will remain on the bushes until after leaf fall.

The sand cherry is easily propagated from seeds. Since the seeds do not produce uniform seedlings, this method of propagation is not advisable for hedge material. A clonal selection is best for uniform hedge material. One or more of the following methods can be used to propagate the plant: Use of softwood cuttings, hardwood cuttings, root cuttings or sucker plants and layering.

Softwood cuttings will root in three to four weeks when taken in

June and placed in sharp sand or a mixture of peat moss and sand. The rooted cuttings can be kept in the propagation bench or in a bed in the lath house until the following spring, or they may be moved to the nursery in the fall the same year.

Hardwood cuttings do not root so readily as softwood cuttings. Cuttings made in the fall and callused in a nursery cellar will root when placed in peat moss the following spring. Root cuttings made in the fall and treated in a similar way will produce plants the following summer.

Sucker plants from an established row of sand cherries offer easy material for propagating. Numerous sucker plants are produced during the summer and then are ideal for starting new nursery rows and hedge plantings.

Layering or mounding the nursery row is also a practical method of producing new plants. The established nursery row of sand cherry is cut back to ground level early in March. Numerous young shoots are produced, and these are mounded up when they are six to eight inches high and then again in July. In late fall the mound is drawn away from the row and the rooted cuttings are removed. Often roots are formed along the entire shoot that was covered with soil, so that each shoot may produce two or more rooted cuttings.

The sand cherry can be fitted into any landscape scene either as an indi-



Rooted softwood cuttings of sand cherry taken in June and stuck in sand under mist spray, showing ease of rooting.

vidual plant, as a group or as a hedge. In test plantings it has been used for groups, for hedges along property lines and as foundation plantings around garages. The dwarfing bushy habit of growth of the sand cherry adapts itself to various spacing distances in the hedge and in group plantings.

Sand cherry apparently grows mostly on a sandy soil in its native habitat—hence the name. The sand cherry selection used in test plantings made satisfactory growth on both Hillsdale sandy loam and on Brookston clay loam. Accordingly, it ap-



A 3-year-old western sand cherry selection growing in the nursery. Note the bushy growth habit which can easily be shaped into a hedge.



Foliage and fruit from a selection of western sand cherry in Spetember.

pears that if satisfactory growing conditions are provided, these plants will grow well on a wide range of soil types.

A well-prepared plant bed is one of the essentials for early and uniform growth of the hedge. In Michigan, early spring planting is most reliable. Fall plantings can also be made if a mulch is provided to prevent the young plants from heaving with frost.

The plantings reported on here

were set in the spring 18 inches apart in the nursery row and 15 and 20 inches apart in urban plantings. Performance of these plantings as dwarf hedges indicates that, for a compact hedge, 12 to 15-inch spacing is satisfactory. If a sparse, informal hedge is desired, 15 to 24-inch spacing is suitable. Plants spaced more than 24 inches apart will appear nearly as individual plants two to three years after planting.

Pruned in Two Ways

To test the performance of sand cherry as hedge material, the hedges were pruned in two different ways. Some received only minor corrective pruning to shape the plants into a uniform-appearing hedge. Others were pruned more severely by shearing top and sides into a rounded-appearing hedge. The bushy growth habit of sand cherry lends itself to round-shaped top pruning. From the standpoint of general appearance and dwarfness, the latter form of pruning was most satisfactory. A taller-appearing hedge can be obtained by light pruning of uneven shoot growth, which is often desirable if the plants are spaced more than 24 inches apart.

The hedge should not be pruned after August 1, because flowers are borne on both new and old wood and with late pruning many spring flow-

er buds are removed. In these tests, the hedges were pruned in early June and then again during the middle part of July.

The plants respond to both mineral and organic fertilizers. Noticeable increase in growth was observed when a complete fertilizer was added to hedgerows in the nursery. These plantings also received an annual application of manure between the rows. An annual application of commercial fertilizer around the plants would be beneficial.

Although the plants of sand cherry are resistant to drought, they will respond to some watering during dry periods. Furthermore, a light mulch of leaf mold or chopped straw will aid in conserving moisture and provide satisfactory growing conditions.

The sand cherry is comparatively free from diseases; however, an occasional plant is attacked by a tip blight. This usually occurs on new succulent shoot growth. An application of Bordeaux when the leaves are expanding will reduce this disease incidence. This spray will also help to control brown rot, which is often present. All fruit should be removed from the plants in the fall.

1. Hansen, N. E. (1911) Bulletin 130. South Dakota experiment station.

2. Hedrick, U. P. (1915) "The Cherries of New York." 36-38.

Nurserymen Elect in Arizona

Members of the Arizona Association of Nurserymen elected Ralph McPheeters, Catalina Heights Nursery, Tucson, as the new president at the association's sixth annual convention, held December 6 and 7 at the San Marcos hotel, Chandler, Ariz. James Driscoll, Phoenix, will serve as vice-president, and John Harlow, Tucson, as secretary-treasurer.

Dr. Leland Burkhart, head of the department of horticulture, University of Arizona, welcomed association members to the short course, which the university cosponsored in connection with the convention.

The Meyer lemon quarantine, subject of much controversy in the Arizona citrus-growing area, was discussed by Dr. R. B. Streets, head of the department of plant pathology, University of Arizona, and W. T. Mendenhall, state entomologist. Attempts have been made to confiscate all Meyer lemon plants, which are host to a virus fatal to other citrus. Sale of the plants has already been prohibited throughout the state. The

speaker outlined the problem for the nurserymen and explained the difficulties which are being encountered in dealing with it.

Soil Topics

Dr. Richard Kuykendall discussed iron chlorosis. Soil conditioning and the high alkalinity of Arizona soils were given attention in a talk by Dr. Wallace Fuller, of the University of Arizona.

Propagation and new plants for the southwest were topics covered by Bernard W. Benson, assistant director of Boyce Thompson Southwestern Arboretum, Superior.

Two speakers on landscape work included Steve Fazio, of the University of Arizona, and Fred M. Guirey, Phoenix architect, the latter speaking on industrial landscaping.

A talk on low temperatures in the Salt river valley, by Dr. R. H. Hilleman, director of the state university's citrus research station; discussion of installment plans, by James Heaney, of the Trust Finance Co., Phoenix, and recommendations for

deciduous fruit, by Lewis Whitworth, of the Arizona Citrus Growers' Association were other program features. Pruning techniques were demonstrated by M. Thompson, of the Corona Clipper Co., Corona, Calif., and a film on salesmanship was shown. For the final session, a panel discussion of general topics of interest to nurserymen was held.

Next year's convention will be held at the University of Arizona, Tucson.

C. RUSSELL JACOBUS, of C. R. Jacobus & Son, Upper Montclair, N. J., reports that he is no longer active in the business, because of reasons of health, and his son, R. D. Jacobus, is now carrying on the enterprise.

C. B. STATON, Possum Hollow Nurseries, Philadelphia, Pa., and his wife left January, via air, for an extended tour of Mexico and Central America. While in Guatemala they expect to visit the ancient Mayan city of Tikal, presently being excavated and restored by the University of Pennsylvania. In Yucatan another Mayan center, Chichen Itza, will be explored.

Florida Garden Center Adjoins Plaza

Sunset Nursery, Tampa, Fla., is among the trade's firms that have developed establishments in connection with large shopping centers. While this nursery is located at 4007 Elrod avenue, its new shop and sales ground, operated as Sunset Nursery's Garden Center, adjoins a large shopping area, at 3856 Britton plaza. The sales ground is easily entered by plaza shoppers through a doorway at the angle formed by the juncture of the two rows of shops that face two sides of the parking area. Persons circulating along the walk in front of the shops generally pass the rear angle of the plaza and have their attention directed to the nursery beyond by a neon sign over the doorway and a view of the garden shop.

The nursery salesyard, shown here, is a half acre in size and occupies a triangular space fanning out from the plaza corner, with the long frontage on a thoroughfare, the shop and a paved parking area along one short side and the wall of another plaza shop along the second short side. With buildings on two sides, the sales area has protection from winds and cold. The street side is landscaped with tall palms. Paths in the sales area are laid out so that people tend to exit through the shop.

Jalousied Sales Quarters

Glass jalousies the full length of the nursery building on one side and across one end enhance the size of the structure, which is 20x80 feet. Of this area, a length of 45 feet is given to the shop; the rest is warehouse space, except for an office 10x10 feet, facing the sales ground.

At one end is an 18-foot aviary holding parakeets, cockateels, brown buntings and Java ricebirds. Every child and almost every adult who enters the nursery visits the aviary. Extending from the nursery structure to the street is a paved area 20x80 feet for loading and storage of stepping-stones.

Gondola display units in the shop are made of pegboard and are on coasters so that they can be turned to present different aspects in the same direction from time to time. Walls are covered with pegboard, also, to facilitate making displays. Banner board along the ceiling permits advertising material to be tacked and changed without marring the walls. Robert L. Perry, proprietor of Sunset Nurseries, pictured here in the garden shop salesroom of his new enterprise, estimates there are over 250 items represented in the merchandise, with additions being constantly made.

Evening Hours

Hours of business are from 10 a. m. until 9 p. m. The salesyard is lighted at night. Evening hours permit a wife to take her husband to the nursery to see plants or a planting plan. It has been found advantageous to be able to show a plan and then take the client out to the salesyard to select the plants. Two or three sizes of each kind of plant are displayed, so that various budgets can be met. A finance company on the plaza will make loans for plantings or equipment, preferring such loans to one on a TV set or a car.

The salesyard is covered with sawdust and shavings, and a sprinkler



Robert L. Perry, proprietor of Sunset Gardens, in nursery salesroom.

system controlled by a solenoid-operated valve makes it possible for automatic watering to be done after hours. This firm is the only one in the area offering steam-sterilized potting soil. It also holds the city sludge contract and offers the product as Sunset sludge or mixes it with peat.

Britton plaza, which Sunset Nursery's Garden Shop adjoins, covers 32 acres. The \$4,000,000 shopping center project, opened last August, has 32 stores now operating and will have more of varied types. There is parking area for 2,400 cars.

Sunset Nursery, which landscaped the plaza, incorporated some unusual ideas in the job. Trees were planted near the center of the parking area to provide some shade next summer and attract vehicles there. The trees, which include palms, are planted in two staggered rows so they do not block a driver's view of any sign for more than a few feet. The plantings are in islands, which help to direct the flow of traffic. The use of mass planting gives color to an otherwise drab parking area.

Opening day last summer the nursery placed over 4,000 finished plants on display in the salesyard, along with several hundred house plants and a large collection of flowering garden plants.

SEVENTH annual northwestern Ohio garden and flower show will be held April 2 to 7, at the Toledo Civic Auditorium, Toledo, O. The theme of the 1957 show will be "Gardens of the Free World."



Triangular salesyard covering half acre in front of glass-jalousied garden center of Sunset Nursery, Tampa, Fla., adjoining the plaza of a large shopping center.

Accident Prevention Program

Three years' endeavor by the California Association of Nurserymen to establish an industrial safety program among its membership has found a steadily growing interest in and acceptance of the efforts. Further, the work has proved its real value in the saving of lives and the reduction of suffering as the result of labor injuries.

This broadly promoted safety program is a part of the bylaws of the trade's parent association in the state and has been carried into the chapter activities in a thorough manner under the guidance of the C. A. N. safety committee, headed by Harold B. Prickett, Prickett's Valley View Nursery, Santa Rosa, Calif. Mr. Prickett has headed the association's safety program since its inception.

Formation of the safety committee within the California Association of Nursermen was initiated because of a state law calling for a definite safety program to be formulated by associations carrying their own group insurance. To conform to this law, a safety committee was named in 1954. A list of aims and objectives was worked out and presented to the board of directors of the C. A. N. at a meeting in April, 1954. The report was accepted in its entirety.

Organization

The organization recommended was a standing committee consisting of at least three members whose duties would be to review, discuss and distribute information concerning accidents occurring to employees of individual nurseries. It was further recommended that committee meetings be held twice a year, in March and August, so that a report could be made to the board of directors at its regular meetings in April and September.

For its educational program, using the monthly bulletins of the association, the safety committee was instructed to cover materials on special hazards common to the nursery business, report on accident trends, publish safety articles and safety slogans and develop other related ideas.

Also provided for was an inspection program, designed to control or remove physical hazards in working places. The safety engineering department of the state compensation insurance fund assists the association's safety committee in this important function.

To maintain consideration of safety work, the subject was made a

topic for the agenda of every meeting of the board of directors of the C. A. N.

Chapter Aids

To extend participation in nurseries, the C. A. N. has taken the responsibility of encouraging, by assistance and example, organized safety activities within the individual nurseries.

Special material on safety obtained by the association from the state

compensation insurance fund, the National Safety Council and other industries that have developed programs and films is distributed by the safety committee as part of its efforts.

Included also in the original committee report was a recommendation regarding the chapter safety programs for accident prevention at the local level. It was pointed out that to be effective safety activities must include the individual employer and his supervisors who are in direct contact with the employees. This, it was added, can best be accomplished through a simple organization composed of individuals who have the desire, energy and enthusiasm to function in the interest of safety.

The suggestion was that each chapter appoint a safety committee chairman and at least two other members. The stated duties and responsibilities of this safety committee were to promote and sponsor safety programs and to provide biennial reports to the state safety chairman by March 15 and August 15.

Chapter Objectives

The following objectives were set for the program: (1) Investigation by a committee representative of all serious accidents occurring within the area and the making of a report to assist the committee in preparing recommendations, (2) handling the distribution of safety material to association members in the chapter, (3) holding of a safety program by the chapter at least once a year and (4) encouragement of the safety idea as everybody's business — in the home, in industry and on the highway.

The response to the foregoing program has been outstanding. Safety panel meetings have been held by the various chapters and in some instances have been repeated. Some of the larger nurseries have held safety programs for their foremen and employees. Last year a saving of three lives was directly attributed to safety instructions.

Besides the annual meetings held by the chapters, safety has been stressed by many other means. Safety kits containing literature and suggestions were provided each chapter to be used as a guide for activities. Articles on safety were published in the monthly bulletin of the state association. First-aid pamphlets were mailed to all members.

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SHADE TREE PRESIDENT



Homer L. Jacobs

Homer L. Jacobs, Kent, O., elected president of the National Shade Tree Conference at the group's annual convention last August, has been a member of the conference during most of its existence.

Born and educated in Jackson county, Ohio, Mr. Jacobs entered the training program of the Davey Tree Expert Co., Kent, in 1922 and soon was made an instructor at the Davey institute. After two years' service in the navy, 1943 to 1945, he returned to the Davey organization to become principal at the institute, a position which he still holds. Mr. Jacobs has also supervised the firm's photographic department for many years. He became a director of the company in 1949 and vice-president in charge of research and technical development in 1951. Mr. Jacobs contributed much to the company's chemical brush control service.

A member of the American Society for Horticultural Science for the past 30 years and of the Northern Nut Growers Association for 26 years, Mr. Jacobs also holds membership in both the northeastern and north central weed control conferences and in the Men's Garden Club of Kent.

Mr. Jacobs and his wife, Alice, have one son, Dr. John Jacobs, and one grandson, Stephen Jay.

Rosedale Nurseries switch to THILCO NURSERY WRAPS

"Personalized"

and gain These Important Advantages—



Better Root Protection!

Thilco POLY-KRAFT duplicates nature by permitting the roots to "breathe" and live as in the ground. It allows the passage of gases or air in or out, yet, moisture is retained within the package so that plants will not dry out.

Quality of Appearance!

Plants and shrubs wrapped in Thilco Nursery Wraps make a neat and most attractive package. There is far less bulk and the creped texture of the wrapper permits stretch for close molding or forming to plant or shrub.

Trade Mark Identification!

Thilco Nursery Wraps whether in sheets, rolls or bags can be furnished print-decorated with your nursery name, trademark or any other message. It costs only a fraction of a cent more per unit than plain, ordinary wraps. Print Decorating adds positive identification, a quality appearance, merchandising value, eye-appealing attraction and greatly increased nursery prestige.

Decided Savings in Shipping Costs!

Thilco Nursery Wraps reduce the need for any root overwrapping with bulky and heavy wet sphagnum moss, wood shavings or peat moss to supply moisture. Result: A much lighter package that greatly reduces shipping and postage costs. One nursery saved over \$22,000.00 in postage alone the first year they switched to Thilco wraps.

Read what Howard C. Taylor, Pres. of Rosedale Nurseries has to say about THILCO Nursery Wraps

Rosedale
ROSEDALE NURSERIES, INC.
SAW MILL RIVER PARKWAY • EASTVIEW, NEW YORK

June 25, 1956

Broadway Paper Company
New York City 51, New York
Gentlemen:

When we first switched to Thilco wraps we used a plain 30/30/30 crinkled duplex paper. This gave us the protection we wanted and also provided the lightness of weight we were looking for to help reduce our shipping and postage costs. We soon learned from your representative, however, that we were "missing the boat" by not taking advantage of the advertising space these wrappers could provide.

Consequently, on our next order for Thilco Nursery Wraps we changed to a green colored paper printed with our name which gives a "quality appearance" to all our packages. This trademarking provides the low cost advertising, positive identification and prestige element we were looking for and affords us excellent continuity in conjunction with our catalog and other advertising mediums.

We are very pleased with our new, distinctive THILCO WRAPS and recommend them highly to other quality nurseries.

Sincerely,

Howard C. Taylor
HOWARD C. TAYLOR
President

NURSERY WRAPS OF EVERY TYPE

- POLYETHYLENE COATED KRAFTS
- WAXED AND WAX TREATED KRAFTS
- ASPHALT LAMINATED KRAFTS
- DUPLEX COMBINATION WRAPS
- STRONG, FLEXIBLE CREPE COMBINATIONS
- BAGS IN VENTILATED, PUNCHED OR TIN-TIED STYLES
- PRINT DECORATED PAPER AND BAGS FOR IDENTIFICATION, ADVERTISING OR INSTRUCTION
- CUSTOM GRADES FOR EVERY REQUIREMENT

Thilco

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QUALITY EVERGREENS

BROAD-LEAVED EVERGREENS

Abelia grandiflora
Barberry, julianae
Buxus sempervirens
Cotoneaster decora lactea
Cotoneaster horizontalis
 Laurel Cherry
Laurocerasus officinalis
 (English Laurel)
Elaeagnus fruitlandi
Elaeagnus simoni
Euonymus, small-leaved
Euonymus coloratus
Euonymus patens
Ilex crenata Biloxi
Ilex crenata convexa
Ilex rotundifolia
Ilex cornuta burfordi
Ilex Foster's Hybrid No. 2
Ilex cornuta femina
Ilex glabra
Ilex opaca, seedlings
Ilex opaca Arden
Ilex opaca Croonenburg
Ilex opaca East Palatka
Ilex opaca howardi
Ilex opaca Hume No. 2
Ilex vomitoria
Ilex vomitoria, dwarf
Jasminum floridum
Ligustrum lucidum nana
Ligustrum Suwannee River
Loropetalum chinense
Magnolia glauca
Magnolia grandiflora
Nandina domestica
Photinia serrulata
Viburnum burkwoodi

DECIDUOUS TREES

Cornus florida
Cornus florida rubra
Euonymus alatus compactus
Magnolia nigra
Magnolia rustica rubra
Magnolia soulangeana

CONIFERS

Arborvitae, orientalis Baker
Arborvitae, orientalis Blue Cone
Arborvitae, orientalis Bonita
Arborvitae, orientalis excelsa
Arborvitae, orientalis newarkii
Arborvitae, fruitlandi
Arborvitae, American globosa
Arborvitae, American globosa compacta erecta
Arborvitae, Pyramidal American
Arborvitae, Dark Green American
Cypress, Blue Lawson
Juniper, Andorra
Juniper, chinensis procumbens
Juniper, excelsa stricta
Juniper, communis fastigiata
Juniper, hetzi glauca
Juniper, pfitzeriana
Juniper, pfitzeriana compacta
Juniper, pfitzeriana nana
Juniper, virginiana repandens
Juniper, sargentii
Juniper, sabina
Juniper, chinensis Sylvestris
Juniper, sabina vonehron
Juniper, sabina vonehron, sheared globes
Juniper, sabina vonehron, sheared pyramids
Juniper, virginialis
Juniper, virginiana burki
Juniper, virginiana canaerti
Juniper, virginiana Dundee
Pine, Austrian

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COLLIERVILLE, TENN.

Ulysses 3-2352

COVER ILLUSTRATION

Acer Tegmentosum

One of our most strikingly attractive native trees is the striped maple, *Acer pensylvanicum*. This little native of the eastern American woodlands, from Quebec, Canada, to Georgia, would be a most welcome addition to our lists of lawn trees, were it not for its reluctance to thrive in open locations. Without the shade-cooled roots assured by taller trees and the moist soil of wooded areas this species is almost impossible to grow, even though some success has been attained with it by grafting on understock of species having root systems better adapted to dry situations.

However, there is a small maple, having a similar leaf, though not nearly so large, and the beautifully



green and white striped bark of *A. pensylvanicum*, that is much less restricted as to growing conditions. *A. tegmentosum*, an importation from Korea and Manchuria, is an excellent substitute for the American striped maple.

Acer tegmentosum, the Korean striped maple, as represented in Durand-Eastman park, at Rochester, N. Y., is about 25 feet tall at 35 to 40 years, thickly branched from a short, low-breaking trunk, and develops a loose, rounded head.

The plants in Durand-Eastman park are growing along the rim of a deep valley and on the slope. While many are well protected by larger growing trees, some have been doing well, for many years, in completely exposed situations, deliberately cleared of all other trees in

[Concluded on page 24]



Pool shipment is loaded directly from cold storage room into new "reefer" car at our siding

Here's Why P & D Roses Arrive *Safely* Through Winter Cold

New Mechanical Refrigerator Cars Maintain Constant, Safe Temperature for Entire Trip

This innovation in transcontinental shipping is another new Peterson & Dering service assuring safe delivery of Oregon's finest roses to any point in the nation.

ORDER NOW for EARLY POOL CAR DELIVERY

Orders now being booked for pool car shipments to eastern points.

EASTERN NURSEYMEN: Contact Frank C. Donovan
130 E. 233rd Street, Euclid, Ohio

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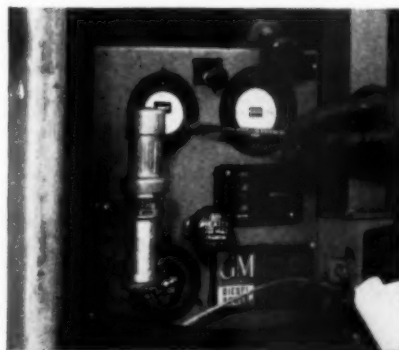
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Twin liquidometers register temperature at top and bottom of the car.



Inside temperatures are checked by inspectors enroute to destination.



Diesel power unit in car provides necessary heat or cold from 70° to -10°.

CHOICE LINEERS

	Each 100 rate	Each 1000 rate		Each 100 rate	Each 1000 rate
1400 <i>Abies concolor</i> , 2-yr., S., 3 to 7 ins.	\$0.07	\$0.06 1/2	600 <i>Elaeagnus angustifolia</i> , 1-yr., S., 12 to 15 ins.	\$0.08	\$0.07 1/2
100 <i>Acer dissectum atropurpureum</i> , 1-yr. grafts	.90	..	225 <i>Elaeagnus angustifolia</i> , 1-yr., S., 18 to 24 ins.	.10	.09
300 <i>Acer palmatum atropurpureum</i> , 1-yr. grafts	.90	..	1200 <i>Elaeagnus umbellata</i> , 1-yr., S., 12 to 15 ins.	.10	.09
200 2-yr. grafts, 10 to 18 ins.	1.50	..	500 <i>Euonymus alatus</i> , 2-yr., T., 6 to 9 ins. ....	.25	..
300 (Seed-grown), 3-yr., T. ....	.75	..	1500 <i>Euonymus alatus compactus</i> , 2-yr., T., 4 to 8 ins. ....	.30	.25
5000 <i>Acer platanoides</i> , 1-yr., S., 6 to 9 ins. ....	.07	.06	500 <i>Euonymus alatus compactus</i> , 3-yr., T., 12 to 18 ins. ....	.45	.40
150 <i>Aralia pentaphylla</i> , 2-yr., T., 6 to 9 ins. ....	.12	..	400 <i>Euonymus carrierei</i> , 2-yr., T. ....	.35	.30
2000 <i>Aronia arbutifolia</i> , 1-yr., S., 10 to 12 ins. ....	.06	.05	1000 <i>Euonymus europaeus</i> , 1-yr., S., 6 to 9 ins. ....	.06	.05
500 <i>Azalea amoena</i> , 2-yr., T. ....	.35	..	1000 <i>Euonymus patens</i> (small-leaved), 2-yr., T. ....	.18	.18
1000 <i>Azalea arnoldiana</i> , 2-yr., T. ....	.35	..	1000 <i>Euonymus coloratus</i> Bristolite, R.C. ....	.25	.22 1/2
1000 <i>Azalea Fedora</i> , 1-yr., C. ....	.40	.35	300 1-yr., T. ....	.35	.30
1000 <i>Azalea Hino-Crimson</i> , 1-yr., C. ....	.40	.35	300 2-yr., T. ....	.40	..
500 <i>Azalea Hinodegiri</i> , 2-yr., T. ....	.35	..	1000 <i>Euonymus vegetus</i> , 1-yr., C. ....	.15	.12 1/2
300 <i>Azalea kaempferi</i> , 3-yr., T., 6 to 9 ins. ....	.60	..	1500 2-yr., T. ....	.30	.25
500 <i>Azalea ledifolia alba</i> , 2-yr., T., 9 to 12 ins. ....	.75	..	500 3-yr., T. ....	.50	..
2000 <i>Azalea mollis</i> , 3-yr., T., 6 to 9 ins. ....	.35	.30	200 <i>Exochorda wilsoni</i> , 2-yr., grafts, 18 to 24 ins.	.75	..
1000 <i>Azalea mollis</i> , red, 3-yr., T., 10 to 15 ins. ....	.50	.45	200 <i>Forsythia fortunei</i> , 2-yr., T., 9 to 12 ins. ....	.07 1/2	..
1000 <i>Azalea mollis</i> , yellow, 3-yr., T., 8 to 12 ins. ....	.50	.45	500 <i>Forsythia Lynwood Gold</i> , 1-yr., C., 18 to 24 ins. ....	.18	.15
1000 <i>Azalea mucronulata</i> , 1-yr., T., 4 to 9 ins. ....	.20	.17 1/2	1000 <i>Forsythia Lynwood Gold</i> , 2 1/4-in. pots	.22 1/2	.20
300 <i>Azalea poukhanensis</i> , 3-yr., T., 6 to 8 ins. ....	.50	..	1500 <i>Forsythia Spring Glory</i> , 1-yr., C., 18 to 24 ins. ....	.18	.15
200 <i>Azalea schlippenbachii</i> , 3-yr., T., 3 to 5 ins.	.50	..	1000 <i>Gleditsia triacanthos</i> , 1-yr., S. ....	.07 1/2	.07
8000 <i>Berberis thunbergii</i> , 2-yr., T. ....	.08 1/2	.07 1/2	2000 <i>Hamamelis japonica</i> , 1-yr., S., 4 to 6 ins. ....	.15	.12 1/2
6200 2-yr., S., 6 to 9 ins. ....	.06	.05	600 <i>Hydrangea P.G.</i> , 2-yr., T., 6 to 9 ins. ....	.15	.12 1/2
5300 2-yr., S., 9 to 12 ins. ....	.07	.06	400 <i>Hydrangea P.G.</i> , 2-yr., T., 12 to 15 ins. ....	.30	.25
15,000 <i>Berberis thunbergii atropurpureum</i> , 2-yr., S., 6 to 9 ins. ....	.05	.04 1/2	500 <i>Hypericum aureum</i> , 1-yr., S., 6 to 9 ins. ....	.08	.06
11,000 2-yr., S., 9 to 12 ins. ....	.07	.06	1250 <i>Hypericum Hidcote</i> , 2 1/4-in. pots	.22 1/2	.20
3000 2-yr., S., 12 to 18 ins. ....	.10	..	1500 <i>Ilex convexa</i> , 2 1/4-in. pots	.12	.10
1000 2-yr., S., 18 to 24 ins. ....	.15	..	500 <i>Ilex convexa</i> , 2-yr., T., 6 to 9 ins. ....	.30	.25
1500 <i>Callicarpa japonica</i> , 1-yr., S., 6 to 9 ins. ....	.06	.05	500 <i>Ilex crenata</i> (true), 2-yr., T., 6 to 9 ins. ....	.40	.35
3000 <i>Callicarpa purpurea</i> , 1-yr., S. ....	.06	.05	1000 <i>Ilex glabra</i> , 2-yr., T. ....	.30	.25
1600 <i>Celastrus scandens</i> , 1-yr., S., 10 to 12 ins. ....	.05	.04 1/2	500 <i>Ilex latifolia</i> , 2-yr., T., 6 to 9 ins. ....	.40	.35
500 <i>Chamaecyparis lutescens</i> , 2-yr., T. ....	.40	.35	1500 <i>Ilex rotundifolia</i> , 2-yr., T., 6 to 9 ins. ....	.40	.35
500 <i>Chamaecyparis obtusa gracilis nana</i> , 1-yr. grafts, 4 to 6 ins. ....	.75	..	3000 <i>Ilex verticillata</i> , 1-yr., S., 15 to 18 ins. ....	.07 1/2	.06
1000 <i>Chamaecyparis plumosa</i> , 2-yr., T. ....	.30	.25	400 <i>Juniperus depressa plumosa</i> , 2-yr., T., 6 to 9 ins. ....	.35	.30
2500 <i>Chamaecyparis plumosa aurea</i> , 2-yr., T. ....	.30	.25	450 <i>Juniperus depressa plumosa</i> 2-yr., T., 9 to 12 ins. ....	.40	.35
500 <i>Chamaecyparis squarrosa</i> Boulev'd, 2-yr., T. ....	.40	.35	500 <i>Juniperus excelsa stricta</i> , 2-yr., T. ....	.50	.45
1000 <i>Clethra alnifolia rosea</i> , 2 1/4-in. pots	.22 1/2	.20	1000 <i>Juniperus glauca hetzi</i> , 2-yr., T., 6 to 9 ins.	.30	.25
1000 <i>Cornus alba sibirica</i> , 1-yr., S., 6 to 9 ins. ....	.06	.05	2000 2-yr., T., 8 to 12 ins. ....	.40	.35
2000 <i>Cornus florida</i> , selected understocks	.08 1/2	.07 1/2	1500 3-yr., T., 9 to 12 ins. ....	.40	.35
1000 <i>Cornus florida rubra</i> , 1-yr., grafts	1.10	.90	500 <i>Juniperus hibernica</i> , 2-yr., T., 9 to 12 ins.	.25	.22
3000 <i>Cornus paniculata</i> , 1-yr., S., 18 to 24 ins. ....	.09	.08	500 <i>Juniperus pfizeriana</i> , 2-yr., T., 6 to 9 ins. ....	.40	.35
900 <i>Cotoneaster acutifolia</i> , 1-yr., S., 6 to 9 ins.	.12	.10	300 <i>Juniperus pfizeriana</i> , 3-yr., T., 9 to 12 ins.	.40	.35
2000 <i>Cotoneaster divaricata</i> , 1-yr., S., 10 to 15 ins. ....	.10	.09	1000 <i>Juniperus sabina</i> , 2-yr., T., 6 to 9 ins. ....	.30	.25
1000 2-yr., S., 10 to 15 ins. ....	.17 1/2	.15	600 <i>Juniperus sabina</i> , 3-yr., T., 9 to 12 ins. ....	.40	.35
3000 2-yr., T. ....	.30	.25	1500 <i>Koeleruteria paniculata</i> , 1-yr., S. ....	.07 1/2	.07
2000 <i>Cotoneaster horizontalis</i> , 1-yr., S., 4 to 6 ins.	.10	.09	200 <i>Kolkwitzia amabilis</i> , 2-yr., T., 6 to 9 ins. ....	.15	..
1000 2-yr., S. ....	.17 1/2	.15	500 <i>Laburnum vossii</i> , 1-yr., S., 9 to 12 ins. ....	.15	.12 1/2
1000 2-yr., T., 8 to 12 ins. ....	.50	.45	2000 <i>Leucothoe catesbaei</i> , 2 1/4-in. pots	.18	.15
1000 <i>Cotoneaster praecox</i> , 1-yr., S., 4 to 8 ins. ....	.25	.22 1/2	2000 <i>Ligustrum ibota</i> , 1-yr., S., 6 to 9 ins. ....	.04	.03
1000 <i>Cotoneaster praecox</i> , 2-yr., T., 8 to 12	.50	.45	400 <i>Lonicera korolkowi</i> , 2-yr., T., 6 to 9 ins. ....	.12	..
1000 <i>Cotoneaster wilsoni</i> , 1-yr., S., 6 to 9 ins. ....	.12	.10	5000 <i>Magnolia grandiflora</i> , 1-yr., S., 6 to 8 ins. ....	.12	.10
3000 <i>Crataegus cordata</i> , 1-yr., S., 15 to 18 ins. ....	.08	.07 1/2	4000 <i>Mahonia aquifolium</i> , 2-yr., S., 6 to 9 ins. ....	.12	.10
800 <i>Cryptomeria japonica lobbi compacta</i> , 1-yr., grafts	.75	..	1600 <i>Mahonia aquifolium</i> , 2-yr., S., 9 to 12 ins. ....	.18	.15
300 2-yr., grafts	1.00	..	1100 <i>Mahonia bealei</i> , 2 1/4-in. pots	.25	..
8000 <i>Cydonia japonica</i> , 1-yr., S. ....	.04 1/2	.03 1/2			
2000 <i>Cydonia japonica</i> , 2-yr., T. ....	.10	.09			
500 <i>Cydonia japonica rubra</i> , 1-yr., S., 9 to 12 ins.	.12	.10			
500 <i>Deutzia gracilis</i> , 2-yr., T., 6 to 9 ins. ....	.15	..			
1000 <i>Deutzia lemoinei</i> , 2-yr., T., 6 to 9 ins. ....	.12	.10			
900 <i>Deutzia Pride of Rochester</i> , 2-yr., T., 6 to 9 ins. ....	.10	..			

9000 *Pachy*
5000 *Pachy*
300 *Philae*
700 *Philae*
1500 *Philae*
1000 *Photi*
1000 *Physo*
6700 *Picea*
9500 *Picea*
2900 *Picea*
3000 *Picea*
1000 *Pieris*
6000 *Pieris*
5000 *Pieris*
1000 *Pieris*
3500 *Pinus*
6000 *Pinus*
5000 3-y
900 5-y
1650 *Pinus*
650 *Pinus*
1350 *Pinus*
150 *Prunu*
300 *Prunu*
400 1-y
400 1-y
250 2-y
1500 *Prun*
5000 *Prun*
1500 *Prun*
500 *Prun*
4400 *Pseu*
9000 *Pseu*
2000 *Rheu*
1000 *Rhus*
6000 1-y
1000 1-y
700 *Ribe*
9000 *Rosa*
3000 *Rosa*
300 *Soph*
2000 *Sorb*
1000 *Sorb*
1100 *Spir*
600 *Symp*
6
3000 *Syrin*
1100 *Tame*
6000 *Taxu*
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1500 *Taxu*
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1000 *Taxu*
1500 *Taxu*

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Each 1000 rate	Each 100 rate	Each 1000 rate	Each 100 rate	Each 1000 rate
\$0.07		\$0.15	\$0.12	
9000	Pachysandra Silver-Edge, 2 1/4-in. pots			
5000	Pachysandra terminalis, 2-yr., T.	.10	.08 1/2	
300	Philadelphus Albatre, 2-yr., T., 6 to 9 ins.	.15		
700	Philadelphus lemoinei, 2-yr., T., 6 to 9 ins.	.12	.10	
1500	Philadelphus Virginal, 2-yr., T., 6 to 9 ins.	.15	.12	
1000	Photinia villosa, 1-yr., S., 6 to 9 ins.	.07 1/2	.06	
1000	Physocarpus monogynus, 2-yr., T., 6 to 9 ins.	.15	.12	
6700	Picea excelsa, 2-yr., S., 2 to 4 ins.	.04	.03	
9500	Picea excelsa, 3-yr., T., 5 to 10 ins.	.09	.08	
2900	Picea pungens, 2-yr., S., 2 to 4 ins.	.06	.05	
3000	Picea pungens, 3-yr., T., 5 to 9 ins.	.15	.12	
1000	Pieris floribunda, 2-yr., T.	.35		
6000	Pieris japonica, 1-yr., T.	.10	.09	
5000	Pieris japonica, 2-yr., TT.	.35	.30	
1000	Pieris japonica, heavy, 2-yr., T., 6 to 9 ins.	.40	.35	
3500	Pinus nigra poiretiana, 2-yr., S., 2 to 4 ins.	.06	.05	
6000	Pinus strobus, 2-yr., S., 2 to 3 ins.	.04	.03	
5000	3-yr., T., 3 to 6 ins.	.10	.09	
900	5-yr., T., 10 to 18 ins.	.12	.10	
1650	Pinus sylvestris, 2-yr., S., 4 to 8 ins.	.05	.04	
650	Pinus thunbergi, 2-yr., S., 3 to 5 ins.	.07	.06	
1350	Pinus thunbergi, 3-yr., T., 4 to 6 ins.	.15	.12	
150	Prunus Amanogawa, 1-yr., whips, 3 to 4 ft.	.90		
300	Prunus Kwanzan, 1-yr., whips, 18 to 24 ins.	.50		
400	1-yr., whips, 2 to 8 ft.	.75		
400	1-yr., whips, 3 to 4 ft.	.90		
250	2-yr., whips, 2 to 3 ft.	.90		
300	2-yr., whips, 3 to 4 ft.	1.00		
1500	Prunus maritima, 1-yr., S., 10 to 18 ins.	.10	.07 1/2	
5000	Prunus tomentosum, 1-yr., S., 6 to 10 ins.	.10	.07 1/2	
500	Prunus tomentosum, 2-yr., T., 8 to 12 ins.	.15		
4400	Pseudotsuga douglasii, 2-yr., S., 3 to 6 ins.	.07	.06 1/2	
9000	Pseudotsuga douglasii, 3-yr., T., 5 to 10 ins.	.11	.10	
2000	Rhamnus cathartica, 1-yr., S., 10 to 12 ins.	.10	.09	
1000	Rhus cotinus, 1-yr., S., 4 to 6 ins.	.05	.04	
6000	1-yr., S., 6 to 9 ins.	.06	.05	
1000	1-yr., S., 8 to 10 ins.	.08	.07	
700	Ribes alpinum, 2-yr., T., 6 to 12 ins.	.15	.12	
9000	Rosa multiflora, S., 2 to 3 mm.	.02 1/2	.02	
3000	Rosa multiflora, S., 3 to 6 mm.	.03 1/2	.03	
300	Sophora japonica, 1-yr., S.	.07 1/2	.07	
2000	Sorbus aucuparia, 1-yr., S., 6 to 9 ins.	.07	.06	
1000	Sorbus aucuparia, 1-yr., T., 12 to 18 ins.	.12	.10	
1100	Spiraea prunifolia plena, 2-yr., T.	.15	.12 1/2	
600	Symphoricarpos chenaultii, 2-yr., T., 6 to 9 ins.	.07 1/2		
3000	Syringa vulgaris, 1-yr., S., 8 to 10 ins.	.07	.06	
1100	Tamarix Pink Cascade, 1-yr., C.	.30	.25	
6000	Taxus cuspidata, 2-yr., T.	.30	.25	
2000	(Upright seedlings), 2-yr., 2 to 4 ins.	.12	.10	
3000	(Upright seedlings), 2-yr., 4 to 6 ins.	.15	.12 1/2	
3000	Taxus cuspidata brevifolia, 2-yr., T.	.30	.27 1/2	
2000	Taxus cuspidata capitata (from seed), 3-yr., T.	.40	.37 1/2	
1500	Taxus cuspidata capitata (from seed), 4-yr., T.	.50	.45	
1000	Taxus hatfieldii, 2-yr., T., 6 to 9 ins.	.45	.40	
1500	Taxus hicksii, 2-yr., T., 6 to 9 ins.	.40	.35	
500	Thuja occidentalis compacta, 2-yr., T., 4 to 8 ins.	\$0.30	\$0.25	
200	Thuja occidentalis elegantissima, 2-yr., T.	.30		
2000	Thuja occidentalis nigra, 2-yr., T.	.40	.35	
800	Thuja occidentalis pyramidalis, 2-yr., T.	.40		
3000	Tilia cordata (Little-leaved Linden), 1-yr., S., 12 to 15 ins.	.15	.12 1/2	
2000	Viburnum americanum, 1-yr., S., 6 to 8 ins.	.09	.08	
1620	Viburnum americanum, 1-yr., S., 8 to 10 ins.	.10	.09	
1000	Viburnum carlesi, 1-yr., S., 12 to 15 ins.	.20	.18	
1200	1-yr., S., 18 to 24 ins.	.25	.22 1/2	
2000	2-yr., S., 8 to 12 ins.	.30	.25	
1500	3-yr., T., 15 to 18 ins.	.75	.60	
500	4-yr., T., 18 to 24 ins.	.90		
2500	Viburnum dentatum, 1-yr., S., 6 to 9 ins.	.08	.07 1/2	
1000	Viburnum dilatatum, 1-yr., S., 6 to 12 ins.	.10	.09	
1000	Viburnum dilatatum, 2-yr., T.	.25	.20	
500	Viburnum lentago, 1-yr., S., 6 to 9 ins.	.08		
1000	Viburnum molle, 1-yr., S., 6 to 9 ins.	.08	.07 1/2	
2000	Viburnum opulus, 1-yr., S., 6 to 8 ins.	.08	.07	
1300	1-yr., S., 8 to 10 ins.	.09	.08	
2000	1-yr., S., 10 to 12 ins.	.12	.10	
1500	Viburnum prunifolium, 1-yr., S., 12 to 15 ins.	.15	.12 1/2	
1100	Viburnum setigerum, 1-yr., S., 15 to 18 ins.	.18	.15	
600	Viburnum tomentosum, 2-yr., T., 6 to 9 ins.	.20		
300	Viburnum tomentosum plicatum, 2-yr., T., 6 to 9 ins.	.25		
500	Viburnum wrightii, 2-yr., grafts, 12 to 18 ins.	.75		
2000	Weigela Bristol Ruby, rooted cuttings	.25	.22 1/2	
1000	Weigela Bristol Ruby, bare-root, 12 to 15 ins.	.45	.40	
300	Weigela Eva Rathke, 2-yr., T., 6 to 9 ins.	.15		
1820	Weigela floribunda, 1-yr., C.	.10	.09	
500	Weigela vaniceki, 1-yr., T., 6 to 9 ins.	.20		

POT GRAFTS—Ready for shipment after May 1, 1957.

	Each 100 rate
300 Acer dissectum atropurpureum	\$0.75
500 Acer palmatum atropurpureum	.65
500 Cornus florida alba plena	.50
3000 Cornus florida rubra	.50
1000 Cornus florida rubra (Prosser strain)	.65
1000 Picea moerheimii	1.00
500 Rhododendron Hybrids, red varieties	.90
500 Thuja occidentalis pyramidalis	.45
500 Thuja orientalis aurea nana	.45
500 Viburnum carlesi	.45
500 Viburnum chenaultii	.50
500 Viburnum juddi	.60

Please note—This list of lining-out stock is accurate as of December 15, 1956. In many items the quantities are small and will be picked up quickly. Please send orders in soon to avoid disappointment. Thirty of a variety takes the hundred rate. There will be an additional charge for less than thirty of a variety. This list cancels all previous lining-out lists. Usual terms. We are wholesale only.

E. D. ROBINSON SALES AGENCY WALLINGFORD, CONN.

"A friendly, efficient service"



Bundle of 15 Musser seedlings, at right, compared with bundle of 15 ordinary seedlings.

20 MILLION TREES A YEAR!

MUSSER TREES GROW BEST²
because—GOOD HEREDITY and CAREFUL SELECTION of SEED—SCIENTIFIC CULTURE IN THE NURSERY assure HEAVY ROOTS and STURDY TOPS. Our TREMENDOUS VOLUME enables us to offer MORE FOR YOUR MONEY.

50 at 100 rate; 500 at 1000 rate.

Per 100 Per 1000

• SPECIAL STRAIN SCOTCH PINE

Very best Christmas tree strain. Grown from seed collected by our own men from selected parent trees. Exceptionally healthy, sturdy, straight-stemmed with rich color.

2-yr., S. (2-0), 2 to 4 ins. . \$ 4.00 \$ 20.00
2-yr., S. (2-0), 3 to 6 ins. . 5.00 25.00

2-yr., S. (2-0), 4 to 8 ins. . 7.00 35.00
2-yr., S. (2-0), 5 to 10 ins. . 9.00 45.00

4-yr., T. (2-2), 6 to 12 ins. . 20.00 100.00

• WHITE PINE

One of the best timber species. Excellent windbreak and hedge. Very good ornamental and Christmas tree.

2-yr., S. (2-0), 3 to 6 ins. . 4.00 20.00
3-yr., S. (3-0), 4 to 8 ins. . 6.00 30.00

Suitable stock for field planting.

3-yr., S. (3-0), 5 to 10 ins. . 8.00 40.00
3-yr., S. (3-0), 8 to 14 ins. . 10.00 50.00

4-yr., T. (2-2), 8 to 10 ins. . 12.00 70.00
5-yr., T. (3-2), 10 to 16 ins. . 20.00
6-yr., T. (3-3), 12 to 24 ins. . 35.00

Note: 4-yr. seedlings root-pruned 10 to 18 ins. Call or write for description, samples and special quantity price on this item. Nursery pickup sale only.

• AUSTRIAN PINE

Good timber species. A beautiful, dark green, long-needed ornamental and Christmas tree, grown from selected seed from the Austrian Alpine region.

2-yr., S. (2-0), 2 to 4 ins. . 4.00 20.00
2-yr., S. (2-0), 3 to 6 ins. . 5.00 25.00

3-yr., S. (3-0), 4 to 8 ins. . 7.00 35.00
3-yr., S. (3-0), 8 to 14 ins. . 10.00 40.00

Both these items are excellent size for direct field planting.

4-yr., T. (2-2), 12 to 18 ins. . 35.00
*7-yr., TT, 18 to 24 ins. . \$1.00 each

*7-yr., TT, 24 to 30 ins. . \$1.50 each

*Sold in lots of 5 or more. Individually packed with ball of peat moss. Note: 4-yr. seedlings, root-pruned 10 to 20 ins. Call or write for description, samples and special quantity price on this item. Nursery pickup sale only.

• MUGHO PINE—Pumilio Strain

Very best of true dwarf. Compact, low-growing ornamental Pine.

2-yr., S. (3-0), 4 to 6 ins. . 7.00 35.00
4-yr., S. (4-0), 6 to 10 ins. . 10.00 50.00

4-yr., T. (3-1), 5 to 9 ins. . 20.00 100.00
5-yr., T. (4-2), 6 to 12 ins. . 25.00 125.00

Heavy stock.

• AMERICAN RED PINE

Excellent timber and Christmas tree. Seed selected by our men from outstanding specimen trees in finest American virgin forests.

2-yr., S. (2-0), 2 to 4 ins. . \$ 5.00 \$ 25.00
3-yr., S. (3-0), 4 to 8 ins. . 7.00 35.00

Suitable for field planting.

3-yr., S. (3-0), 8 to 12 ins. . 9.00 45.00
4-yr., T. (2-2), 8 to 12 ins. . 20.00 100.00

5-yr., T. (2-3), 12 to 18 ins. . 27.00 135.00
5-yr., T. (2-3), 18 to 24 ins. . 40.00 200.00

• JAPANESE BLACK PINE—Pinus thunbergi

Light green needles, 4½ inches long. Hardy, valuable for use in exposed conditions along the seashore. Very fast-growing.

2-yr., S. (2-0), 3 to 6 ins. . 7.00 35.00

• PONDEROSA PINE—Western Yellow Pine

Hardy, fast-growing timber tree.

2-yr., S. (2-0), 3 to 5 ins. . 5.00 25.00

• MUSSER EXCLUSIVE NORWAY SPRUCE

Fast-growing—Grown from seed collected by our own men from selected trees. Exceptionally fast-growing, straight-stemmed stock makes this strain especially desirable for Christmas trees, ornamentals and timber.

2-yr., S. (2-0), 5 to 10 ins. . 7.00 35.00
3-yr., S. (3-0), 8 to 14 ins. . 10.00 50.00

3-yr., T. (2-1), 6 to 12 ins. . 13.00 65.00
4-yr., T. (2-2), 8 to 14 ins. . 18.00 90.00

5-yr., T. (3-2), 12 to 18 ins. . 30.00
Heavy stems.

• NORWAY SPRUCE

2-yr., S. (2-0), 2 to 4 ins. . 3.00 15.00
2-yr., S. (2-0), 3 to 6 ins. . 5.00 25.00

3-yr., S. (3-0), 4 to 8 ins. . 7.00 35.00
*7-yr., TT, 12 to 18 ins. . \$1.00 each

*8-yr., TT, 18 to 24 ins. . \$1.50 each
*8-yr., TTT, 24 to 30 ins. . \$2.50 each

*Sold in lots of 5 or more. Individually packed with ball of peat moss.

• BLACK HILLS SPRUCE

Fine ornamental. Most compact Spruce.

2-yr., S. (2-0), 3 to 6 ins. . 5.00 25.00
3-yr., S. (3-0), 4 to 8 ins. . 7.00 35.00

4-yr., S. (4-0), 6 to 10 ins. . 10.00 50.00
4-yr., T. (2-2), 5 to 10 ins. . 17.00 85.00

6-yr., T. (4-2), 8 to 15 ins. . 30.00 150.00

Per 100 Per 1000

• WHITE SPRUCE

Similar to Norway Spruce except for its lighter color and slower growth rate.

2-yr., S. (2-0), 4 to 8 ins. . \$ 5.00 \$ 25.00
3-yr., S. (3-0), 4 to 8 ins. . 6.00 30.00

3-yr., S. (3-0), 8 to 12 ins. . 8.00 40.00

4-yr., T. (2-2), 8 to 14 ins. . 18.00 90.00

*7-yr., TT, 12 to 18 ins. . \$1.00 each

*8-yr., TT, 18 to 24 ins. . \$1.50 each

*Sold in lots of 5 or more. Individually packed with ball of peat moss. Nice, heavy branched plants.

• SERBIAN SPRUCE—Picea omorika

Valuable ornamental. Tall, symmetrical habit of growth, with very narrow branch spread. Needles ½ to ¾ in. long. Glossy green.

4-yr., S. (4-0), 8 to 16 ins. . 16.00 80.00
4-yr., T. (3-1), 8 to 12 ins. . 25.00 125.00

• COLORADO BLUE SPRUCE

Excellent stock—finest in the country. Fine for ornamental and Christmas tree use. Sturdy and compact in form; straight stems. From slightly blue-green to marvelous blue. Seed collected at very high cost from trees showing only the best characteristics.

2-yr., S. (2-0), 2 to 4 ins. . 4.00 20.00
3-yr., S. (3-0), 3 to 6 ins. . 6.00 30.00

3-yr., S. (3-0), 5 to 10 ins. . 10.00 50.00
Very superior stock.

4-yr., S. (4-0), 10 to 14 ins. . 14.00 70.00
(root-pruned)

3-yr., T. (2-1), 4 to 8 ins. . 15.00 75.00
4-yr., T. (2-2), 6 to 10 ins. . 25.00 125.00

4-yr., T. (3-2), 8 to 12 ins. . 33.00 175.00
*6-yr., TT, 10 to 12 ins. . \$1.00 each

*8-yr., TT, 16 to 20 ins. . \$2.00 each

*Sold in lots of 5 or more. Individually packed with ball of peat moss.

• ENGELMANN BLUE SPRUCE

3-yr., S. (3-0), 3 to 6 ins. . 6.00 30.00

• CANADIAN HEMLOCK

Lacy, graceful growing habit. Can be sheared to any size. Hedges, specimen ornamentals. Full shade or full sunlight.

2-yr., S. (2-0), 4 to 8 ins. . \$10.00 \$ 50.00
3-yr., S. (3-0), 8 to 14 ins. . 17.00 85.00

4-yr., T. (2-2) (3-1),
6 to 12 ins. . 30.00

5-yr., T. (3-2), 8 to 12 ins. . 40.00
*6-yr., TT, 12 to 15 ins. . \$1.00 each

*Sold in lots of 5 or more. Individually packed with ball of peat moss. Field-grown. Small ornamental size for hedge, background or specimen plants.

• DOUGLAS FIR

Hardy Rocky Mountain type. Superior ornamental and Christmas tree.

2-yr., S. (2-0), 4 to 6 ins. . 5.00 30.00
3-yr., S. (3-0), 6 to 8 ins. . 10.00 45.00

4-yr., T. (3-1), 6 to 10 ins. . 16.00 80.00
*7-yr., TT, 12 to 18 ins. . \$1.50 each

*Sold in lots of 5 or more. Individually packed with ball of peat moss.

• BALSAM FIR

Extensively used for Christmas trees and ornamentals.

2-yr., S. (2-0), 2 to 3 ins. . 6.00 30.00
5-yr., T. (3-2), 6 to 12 ins. . 17.00 85.00

6-yr., T. (3-3), 10 to 16 ins. . 35.00
*7-yr., TT, 12 to 18 ins. . \$1.00 each

*8-yr., TT, 18 to 24 ins. . \$1.50 each

*Sold in lots of 5 or more. Individually packed with ball of peat moss. Field-grown, well branched for an early ornamental.

• CONCOLR FIR

Excellent ornamental. Silver trunk and soft silver foliage. One of the best Christmas trees. Holds needles best of any short-needle tree.

2-yr., S. (2-0), 3 to 6 ins. . 10.00 50.00
4-yr., T. (2-2), 4 to 9 ins. . 25.00

4-yr., T. (2-2), 8 to 14 ins. . 40.00

• FRASER FIR

Often called Southern Balsam Fir. Shiny green foliage, lighter under side. Delightful fragrance and attractive purplish cones. Hardy. Good ornamental or Christmas tree.

*T. 10 to 12 ins. . \$1.00 each
*T. 15 to 18 ins. . \$1.50 each

*Sold with a lot of 5 or more. Packed with ball of peat moss.

• BLUE ATLAS CEDAR—*Cedrus atlantica glauca*

Grown from seed. Silvery to light green needles, pyramidal form. Similar in appearance to Japanese Larch but does not lose its needles in fall.

3-yr., S. (3-0), 12 to 18 ins. \$13.00 \$65.00
3-yr., S. (3-0), 18 to 24 ins. 17.00 85.00

Root-pruned in beds to produce stronger, more fibrous root system.

• JAPANESE LARCH

Japanese and European Larch are not evergreen, but are included here because the fine, light green needles relate them to evergreens in appearance.

2-yr., S. (2-0), 8 to 12 ins. 10.00

• EUROPEAN LARCH

2-yr., S. (2-0), 8 to 12 ins. 7.00 35.00

• AMERICAN ARBORVITAE

Popular for hedges and ornamentals

2-yr., S. (2-0), 3 to 5 ins. 4.00 20.00

3-yr., S. (3-0), 4 to 8 ins. 5.00 25.00

3-yr., S. (3-0), 6 to 10 ins. 8.00 40.00

4-yr., T. (2-2), 8 to 12 ins. 20.00 100.00

5-yr., T. (3-2), 12 to 16 ins. 30.00 150.00

• GLOBE ARBORVITAE—Transplants

Plants started from rooted cuttings to assure true strains.

Woodwardii, dark green

1-yr., T., 4 to 6 ins. 30.00 250.00

*Small ornamental, 8 to 10-in. spread, 10 to 12 ins., \$1.75 each

*Ornamental, 10 to 12-in. spread, 12 to 14 ins., \$2.25 each

*Field-grown, twice transplanted and twice sheared. Excellent, bushy plants. Sold in lots of 5 or more. Individually packed with ball of peat moss.

Hovey's, green

1-yr., T., 4 to 6 ins. 30.00 250.00

*Ornamental, 12 to 16-in. spread, 12 to 16 ins., \$2.00 each

*Field-grown, twice transplanted and twice sheared. Excellent, bushy plants. Sold in lots of 5 or more. Individually packed with ball of peat moss.

• PYRAMIDAL ARBORVITAE—Transplants

All plants started from rooted cuttings to assure true strains.

Compacta, green

1-yr., T., 5 to 7 ins. 25.00 200.00

2-yr., T., 10 to 15 ins. 90.00

Heavy, field-grown.

• JUNIPER, Blue Pfitzer, hetzi glauca

This improved Juniper with its irregular spreading habit, fast growth, and bluish color can be used extensively in landscape work. Preferred by many for foundation plantings.

1-yr., T., 5 to 7 ins. 25.00 200.00

2-yr., T., 6 to 10 ins. 65.00

Field-grown.

2-yr., T., 10 to 15 ins. 90.00

Heavy, field-grown.

*T.T., spread, 15 to 18 ins., \$2.25 each

*Field-grown, ornamental size. Extra-nice plants. Sold in lots of 5 or more. Individually packed with ball of peat moss.

• JUNIPER, pfitzeriana compacta

1-yr., T., 5 to 7 ins. 30.00

• BARBERRY—Red

Unusually good red color. Excellent hedge plants. Red leaves in summer, red berries in fall and winter.

2-yr., S. (2-0), 6 to 8 ins. 8.00 40.00

2-yr., S. (2-0), 8 to 14 ins. 11.00 55.00

3-yr., S. (3-0), 12 to 18 ins. 15.00 75.00

• BARBERRY—Green

2-yr., S. (2-0), 6 to 12 ins. 6.00 30.00

2-yr., S. (2-0), 12 to 18 ins. 8.00 40.00

3-yr., S. (3-0), 18 to 24 ins. 12.00 60.00

• AMERICAN HOLLY—Seedlings

Hex opaca

1-yr., S., 2 to 4 ins. 8.00 60.00

Mixed sex.

Over 35 MILLION TREES! actual production last year MUSSEY TREES HAVE TO BE GOOD

Per 100 Per 1000

• JAPANESE HOLLY

Excellent evergreen shrub and hedge.

Ilex crenata, from seed

4-yr., S., 6 to 10 ins. \$20.00 \$100.00

Ilex convexa, transplanted rooted cuttings

1-yr., T., 4 to 6 ins. 30.00 175.00

Ilex rotundifolia, transplanted rooted cuttings

1-yr., T., 5 to 6 ins. 20.00 175.00

2-yr., T., 6 to 8 ins. 30.00 250.00

*4-yr., T., spread, 10 to 12 ins., \$1.75 each

*Field-grown. Sold in lots of 5 or more. Individually packed with ball of peat moss.

Ilex crenata hetzi, transplanted rooted cuttings

Very shiny, convex-shaped leaf. Larger leaf than *Convexa*.

*2-yr., T., 8 to 10-in. spread, 8 to 12 ins., 80¢ each

*Bare-root. Sold in lots of 5 or more.

• JAPANESE YEW—Grown from seed

Taxus cuspidata capitata, upright, pyramidal. Extra nice plants; excellent, fibrous roots.

2-yr., S. (2-0), 3 to 6 ins. 20.00 175.00

4-yr., T. (2-2), 6 to 10 ins. 40.00 300.00

• JAPANESE YEW—Transplanted rooted cuttings

True strains from rooted cuttings.

Taxus cuspidata, spreading

1-yr., T., 5 to 6 ins. 20.00 150.00

2-yr., T., 6 to 8 ins. 30.00 250.00

2-yr., T., 8 to 12 ins. 40.00 350.00

*5-yr., T.T., spread, 12 ins., \$2.50 each

*Field-grown. Sold in lots of 5 or more. Individually packed with ball of peat moss.

Taxus hicksii, upright

1-yr., T., 5 to 6 ins. 25.00 175.00

2-yr., T., 6 to 10 ins. 40.00

*5-yr., T.T., 12 to 15 ins., \$2.50 each

*Field-grown. Sold in lots of 5 or more. Individually packed with ball of peat moss.

Taxus Moon's columnaris

One of the very best upright types.

1-yr., T., 4 to 6 ins. 25.00 175.00

Taxus brownii, upright

1-yr., T., 4 to 6 ins. 25.00 175.00

2-yr., T., 6 to 10 ins. 40.00 350.00

Taxus intermedia, spreading

1-yr., T., 4 to 6 ins. 25.00 175.00

2-yr., T., 6 to 8 ins. 40.00 350.00

Taxus andersonii, spreading

Light green.

2-yr., T., 6 to 8 ins. 40.00 350.00

Taxus hatfieldii, upright

1-yr., T., 4 to 6 ins. 25.00 175.00

2-yr., T., 6 to 8 ins. 40.00

Taxus hatfieldii No. 24, spreading

1-yr., T., 4 to 6 ins. 25.00 175.00

Taxus cuspidata capitata, spreading

From side cuttings.

1-yr., T., 4 to 6 ins. 20.00 150.00

• DROOPING LEUCOTHOE—*Catesbaei*

An evergreen shrub with glossy green foliage turning to rich fall colors. Flowers are drooping white bells appearing in May.

2-yr., T., 4 to 8 ins. 30.00

4-yr., T., 8 to 10 ins. 50.00

Sold in lots of 10 or more.

*T.T., field-grown, 10 to 15 ins., \$1.50 each

*Sold with a lot of 5 or more. Packed with ball of peat moss.

• RED OAK—*Quercus rubra*

Northern, hardy, rapid-growing timber and shade tree. Dark red fall foliage.

S., 4 to 10 ins. 12.00 60.00

Per 100 Per 1000

• PIN OAK—*Quercus palustris*

Forms a symmetrical, pyramidal head with long pendulous branches. Foliage is deeply cut and assumes a brilliant red autumn color. Because of rapid growth, it is much used for avenues and lawn specimens. May be ordered in lots of 10 at the 100 rate.

S., 8 to 12 ins. \$20.00 \$100.00

T., 24 to 36 ins. 60.00

T., 36 to 48 ins. 100.00

• CHINESE CHESTNUT—Blight-resistant

Ching Chow strain

Will bear large, sweet delicious nuts. Very fast-growing. Valuable as ornamental and for shade, as well as for fruit.

Grows 30 to 40 ft. tall. May be ordered in lots of 10 at the 100 rate.

S., 12 to 18 ins. 50.00 300.00

S., 18 to 24 ins. 70.00

• PINK DOGWOOD—Grafted Trees

Grafts, 12 to 18 ins. 150.00

Grafts, 18 to 24 ins. 300.00

Sold in lots of 5 at the 100 rate.

Grafts, 2 to 3 ft., \$3.95 each

• WHITE DOGWOOD—*Cornus florida*

One of the most beautiful of small trees. Handsome in early spring with its white-petaled flowers and again in fall with bright red fruit and gorgeous leaf coloring.

S., 6 to 12 ins. 6.00 30.00

S., 12 to 18 ins. 10.00 50.00

S., 18 to 24 ins. 13.00 65.00

S., 24 to 30 ins. 18.00 90.00

T., 18 to 24 ins. 25.00 125.00

(Nurserymen—write for quotations for lining and potting stock.)

• JAPANESE ANDROMEDA—

Pieris japonica

An excellent, broad-leaved evergreen. Young foliage usually rich bronze in spring, later turning a light green. Creamy-white flowers in pendulous clusters to 5 inches long. Can be grown in shade or full sun.

*5-yr., T., field-grown, 12 to 15 ins., \$1.75 each

*5-yr., T., field-grown, 15 to 18 ins., \$2.50 each

*Sold in lots of 5 or more. Individually packed with ball of peat moss.

• NORWAY MAPLE—*Acer platanoides*

A large handsome tree with broad, rounded head. Leaves are rich green and remain until late fall. Extensively used for street and shade tree plantings.

S., 4 to 6 ins. 12.00 60.00

S., 18 to 24 ins. 25.00 125.00

• WHITE BIRCH

S., 16 to 24 ins. 12.00 60.00

Clump trees, 3 to 4 stems, 3 to 4 ft., \$3.75 each; \$9.75 for 3

Excellent, nicely-branched trees.

• LILACS—*Syringa vulgaris*

3-yr., S., 10 to 18 ins. 10.00 80.00

• FLOWERING CRAB APPLE—Grafted Trees

(Very nicely branched)

Varieties: *Hopa* (Red), *Eleyi* (Red), *Floribunda* *Atrapurpurea* (Red), *Red Silver* (Red), *Floribunda* (Pink), *Halliana* *Parkmanni* (Rose) and *Doiga* (White).

3-yr., stock, 5 to 6 ft., \$1.50 each

Sold in lots of 25 or more.

Orders on above Flowering Crab Apples cannot be accepted for less than 25.

All stock grown from
Selected Seed and Cuttings
CAREFUL GRADING
AND PACKING

As much difference in Seed
as in common and purebred
cattle.

ORDER NOW!

Write or
Phone 5-5686

Many Other Evergreen Items—*Rhododendrons* and *Azaleas*
—Our cold storage permits late shipments—

No charge for packing and boxing.
SEND FOR COMPLETE CATALOG and WHOLESALE PLANTING
LIST — also famous CHRISTMAS TREE GROWERS' GUIDE.

MUSSEY FORESTS

Box 16-A
INDIANA, PENNA.



"REYNOLDS ALUMIPAKS encourage self-service sales... please customers with their convenience, too!"

—says Charles Crum, Gen. Mgr., Rosedale's Nurseries



REYNOLDS ALUMIPAKS*

8 1/4" x 4 1/4" x 2" deep, also 8 1/2" x 4 1/2" x 2 1/2" deep, both with rounded corners. Hold a number of plants . . . protect them without repotting from seed flat to retail sale. Standard in bright, sparkling aluminum. Colors available on quantity order.



REYNOLDS ALUMIPOTS*

Approximately 1/20th the weight of clay. Broad base design minimizes tipping. Require less water and fertilizer, resulting in great economies. Available in brilliant, sales-stimulating silver, green, gold, blue and red. Sizes 2 1/4", 3", 4" and 4" tub.

*Trademarks, Reynolds Metals Company



MAIN OFFICE - 400 WEST HUNTINGTON DRIVE • ELLIOTT 8-4516 • MONROVIA, CALIFORNIA

December 5, 1956

Mr. David P. Reynolds
Vice President, Sales
Reynolds Metals Company,
Louisville 1, Kentucky

Dear Mr. Reynolds:

It isn't often that we write a complimentary letter on such a commonplace subject as plant containers. But your convenient new Reynolds Alumipaks are something else again — and far from the ordinary. In our business, the cutting of plants from flats, wrapping and handling, consumes valuable time. And there's the danger of plant damage when the customer transplants at home.

But now you folks come up with a brand-new kind of container that eliminates all these problems. In fact, Alumipaks encourage customers to wait on themselves. They prompt take-with sales right in the containers. It saves our time — and the customer can use the attractive Alumipaks just "as is" without transplanting.

They reduce constant watering and repotting for us too. To top it off, Alumipaks are real merchandisers as well. Our customers like the convenience of these lightweight, nonbreakable containers. They've helped increase our sales greatly, consequently our profits are up!

We enthusiastically recommend that anyone in the retail nursery business order their plants in bright new Alumipaks.

Sincerely,

Charles S. Crum
Charles Crum, General Manager
Rosedale's Nurseries, Inc.

Branches - ENCINO - GLENDALE - LA HABRA - LOS ANGELES - MONROVIA - POMONA

SAVE
SPACE

SAVE
HANDLING

SAVE
BREAKAGE

SAVE
PLANTS

ORDER
TODAY

Reynolds Alumipaks and Alumipots are available from
Distributor warehouse stocks throughout the country.

REYNOLDS  ALUMINUM

Reynolds Metals Company, General Sales Office, Louisville 1, Kentucky

See "CIRCUS BOY", Reynolds wonderful new show, Sundays, NBC-TV Network.



Women shoppers already know Reynolds Wrap and the clean, sparkling convenience of aluminum. Take advantage of the powerful merchandising behind the REYNOLDS WRAP ALUMINUM PACKAGING SEAL . . . nationally advertised in top magazines and on network TV.

SURPLUS STOCK IN STORAGE

TERMS: As per our published list which includes satisfactory credit or cash with order.
Please order full bunches. 300 of any variety and size at 1000 rate.

Hardy northern origin understocks for grafting or budding. Compatible with almost all varieties of apples.

	Per 100	Per 1000
MALUS BACCATA (Siberian Crab Apple) one of the hardiest.		
1/2-in. cal. straight.....	\$5.50	\$60.00
No. 1, straight.....	3.50	50.00
No. 3, straight.....	3.00	25.00
MALUS COLUMBIA —Seedlings are vigorous and even. Very valuable as understocks.		
No. 2, straight.....	4.50	40.00
No. 2, branched.....	4.50	40.00
No. 3, straight.....	3.00	25.00
MALUS MANDSCHURICA , deep-rooting, wood slightly brittle.		
No. 1, straight.....	5.50	50.00
No. 2, straight.....	4.50	40.00
No. 3, straight.....	3.00	25.00
MALUS ROSYBLOOM , crosses of <i>baccata</i> and <i>niedzwetzkyana</i> , two of the hardiest.		
No. 2, straight.....	4.50	40.00
No. 3, straight.....	3.00	25.00

AMELANCHIER ALNIFOLIA (Juneberry)—usually a large shrub (6 to 10 ft.), native range Michigan to Oregon. Blueberry-like fruit is sweet.

	Per 100	Per 1000
12 to 18 ins.....	\$5.50	\$50.00
6 to 12 ins.....	4.00	35.00
3 to 6 ins.....	2.50	20.00

	Per 100	Per 1000
ASH, GREEN		
2 to 3 ft.....	4.00	35.00
18 to 24 ins.....	3.00	25.00
12 to 18 ins.....	2.50	20.00
6 to 12 ins.....	1.40	12.00

	Per 100	Per 1000
BOX ELDER		
18 to 24 ins.....	3.00	25.00
12 to 18 ins.....	2.50	20.00
6 to 12 ins.....	1.50	12.00

	Per 100	Per 1000
CLEMATIS LIGUSTIFOLIA		
No. 1 (approx. 8 to 15 ins.).....	4.50	40.00
No. 2.....	3.50	30.00

	Per 100	Per 1000
COLUTEA ARBORESCENS (Bladder Senna)		
3 to 4 ft.....	7.50	70.00
2 to 3 ft.....	6.00	55.00
6 to 12 ins.....	4.50	40.00

	Per 100	Per 1000
CORNUS ANOMUM (Silky Dogwood)		
2 to 4 ft.....	8.50	80.00
2 to 3 ft.....	7.00	65.00
18 to 24 ins.....	6.00	55.00
12 to 18 ins.....	5.00	45.00

	Per 100	Per 1000
CORNUS STOLONIFERA		
18 to 24 ins.....	6.00	55.00
12 to 18 ins.....	5.00	45.00
6 to 12 ins.....	3.00	25.00

	Per 100	Per 1000
CORYLUS AMERICANA (Hazelnut)		
12 to 18 ins.....	8.00	75.00

	Per 100	Per 1000
COTONEASTER ACUTIFOLIA		
18 to 24 ins.....	11.00	100.00
12 to 18 ins.....	8.50	75.00
6 to 12 ins.....	5.50	50.00
4 to 6 ins.....	3.50	30.00
18 to 24 ins., br.....	15.00	150.00
12 to 18 ins., br.....	13.00	115.00

ELM, AMERICAN Per 100 Per 1000

	Per 100	Per 1000
ELM, CHINESE		
3 to 4 ft.....	7.50	65.00
2 to 3 ft.....	4.50	40.00
18 to 24 ins.....	3.00	25.00
6 to 12 ins.....	1.50	12.00

	Per 100	Per 1000
GRAPE, WILD (<i>Vitis riparia</i>)		
18 to 24 ins.....	5.00	45.00
12 to 18 ins.....	4.00	35.00

	Per 100	Per 1000
HACKBERRY		
2 to 3 ft.....	7.00	65.00
6 to 12 ins.....	2.50	20.00

	Per 100	Per 1000
HONEYSUCKLE		
18 to 24 ins.....	11.00	100.00
12 to 18 ins.....	7.50	65.00
6 to 12 ins.....	5.50	50.00

	Per 100	Per 1000
LILAC, COMMON		
12 to 18 ins.....	7.00	65.00
9 to 12 ins.....	6.00	55.00
6 to 9 ins.....	4.50	40.00
4 to 6 ins.....	3.50	30.00

	Per 100	Per 1000
LILAC, VILLOSA		
2 to 3 ft.....	11.00	100.00
18 to 24 ins.....	9.00	85.00

	Per 100	Per 1000
LOCUST, BLACK		
4 to 5 ft.....	8.50	75.00
3 to 4 ft.....	5.50	50.00
2 to 3 ft.....	4.00	35.00
18 to 24 ins.....	3.00	25.00
6 to 12 ins.....	1.70	15.00

	Per 100	Per 1000
LOCUST, THORNLESS HONEY		
2 to 3 ft.....	5.00	45.00
18 to 24 ins.....	3.50	30.00
6 to 12 ins.....	1.70	14.00

	Per 100	Per 1000
MAPLE, GINNALA		
12 to 18 ins.....	4.00	35.00
6 to 12 ins.....	3.00	25.00

	Per 100	Per 1000
MULBERRY, RUSSIAN		
18 to 24 ins.....	4.00	35.00
12 to 18 ins.....	3.00	25.00
6 to 12 ins.....	1.40	12.00

	Per 100	Per 1000
OAK, BUR		
12 to 18 ins.....	8.50	80.00
9 to 12 ins.....	7.00	65.00
6 to 9 ins.....	5.50	50.00

	Per 100	Per 1000
OAK, PIN		
9 to 12 ins.....	7.00	65.00
6 to 9 ins.....	5.00	45.00

	Per 100	Per 1000
OAK, RED		
9 to 12 ins.....	7.00	65.00
6 to 9 ins.....	5.50	50.00

	Per 100	Per 1000
OLIVE, RUSSIAN		
6 to 12 ins.....	2.40	20.00

	Per 100	Per 1000
NINEBARK, RAMALEYI , semidwarf, northern		
18 to 24 ins.....	6.00	55.00
12 to 18 ins.....	4.50	40.00

	Per 100	Per 1000
PRUNUS MELANOCARPA (Western Black Choke Cherry), 8 to 15 ft.		
6 to 9 ins.....	3.50	30.00
4 to 6 ins.....	2.50	20.00

	Per 100	Per 1000
PRUNUS PADUS COMMUTATA (Mayday Tree), 10 to 15 ft.		
3 to 4 ft.....	12.00	110.00
2 to 3 ft.....	8.00	75.00
18 to 24 ins.....	7.00	65.00
12 to 18 ins.....	5.50	50.00
6 to 12 ins.....	4.00	35.00
4 to 6 ins.....	2.50	20.00

The following varieties can and are being used as understocks.

PRUNUS AMERICANA (American Plum) Per 100 Per 1000

	Per 100	Per 1000
1/2-in. cal. (approx. 2 to 3 ft.).....	\$ 5.00	\$ 45.00
3/4-in. cal. (approx. 18 to 24 ins.).....	4.50	40.00
1/2-in. cal. (approx. 12 to 18 ins.).....	3.20	28.00
No. 3 (approx. 6 to 12 ins.).....	2.10	18.00

	Per 100	Per 1000
PRUNUS BESSEYI (Western Bush Cherry)		
3 to 4 ft.....	12.00	110.00
2 to 3 ft.....	9.00	85.00
3/4-in. cal. (approx. 18 to 24 ins.).....	8.00	75.00

	Per 100	Per 1000
PRUNUS FRUTICOSA (Mongolian Cherry), 3 to 4 ft.		
18 to 24 ins., br.....	11.00	100.00
3/4-in. cal. (approx. 12 to 18 ins.).....	8.00	75.00

	Per 100	Per 1000
1/2-in. cal. (approx. 6 to 8 ins.).....	4.50	40.00
No. 3 (approx. 6 to 12 ins.).....	6.50	60.00

	Per 100	Per 1000
PRUNUS HORTULANA , a nonstuckering American Plum, 8 to 12 ft.		
3/4-in. cal. (approx. 18 to 24 ins.).....	5.50	50.00
1/2-in. cal. (approx. 12 to 18 ins.).....	4.50	40.00

	Per 100	Per 1000
No. 3 (approx. 6 to 12 ins.).....	3.00	25.00
PRUNUS JAPONICA (Korean Cherry), 2 1/2 to 3 ft.		
3/4-in. cal. (approx. 12 to 18 ins.).....	8.00	75.00

	Per 100	Per 1000
1/2-in. cal. (approx. 8 to 12 ins.).....	6.50	60.00
No. 3 (approx. 6 to 8 ins.).....	4.50	40.00

	Per 100	Per 1000
PRUNUS SPINOSA (European Plum, black thorn), 3 to 5 ft.		
3/4-in. cal. (approx. 12 to 18 ins.).....	8.00	75.00
1/2-in. cal. (approx. 8 to 12 ins.).....	6.50	60.00

	Per 100	Per 1000
No. 3 (approx. 6 to 8 ins.).....	4.50	40.00
PRUNUS TOMENTOSA (Nanking Cherry), 5 to 6 ft.		
2 to 3 ft.....	15.00	150.00
18 to 24 ins.....	10.00	90.00
6 to 12 ins.....	4.50	40.00

PRUNUS SEROTINA (Wild Black Cherry) Per 100 Per 1000

	Per 100	Per 1000
30 to 40 ft.....	\$ 5.50	\$ 50.00
2 to 3 ft.....	4.50	40.00
18 to 24 ins.....	3.50	30.00

	Per 100	Per 1000
REDBUD		
2 to 3 ft.....	14.00	130.00
18 to 24 ins.....	10.00	90.00
12 to 18 ins.....	7.50	65.00
6 to 12 ins.....	5.50	50.00

	Per 100	Per 1000
RIBES AUREUM		
2 to 3 ft.....	7.50	70.00
18 to 24 ins.....	6.50	60.00
12 to 18 ins.....	5.00	45.00
6 to 12 ins.....	3.50	30.00

order to determine their hardihood under such conditions. Rehder lists the species as hardy from zone 4, and it is well worth consideration for use as a most desirable ornamental tree.

Acer davidi, from China, is another showy striped maple attractive the year around, with its unusual branches and good fall color of yellow and purple. It is available in the trade and should be more generally used.

The cover illustration is from a photograph taken at Rochester by Gavaghan & Dobson. J. G.

MICHIGAN STATE CHANGE

The nursery and home gardening interests of the state of Michigan will be better served by staff changes

and additions, according to Dr. Donald P. Watson, in charge of the ornamental horticulture division of the department of horticulture, Michigan State University, East Lansing. At a meeting November 9, the state board of agriculture approved the transfer of Dr. Fred B. Widmoyer, who has been assistant professor of ornamental horticulture (research) since 1954, to the position of assistant professor and extension specialist in horticulture. Dr. Widmoyer will be in charge of the various phases of home gardening. He has the B.A. and M.S. degrees from Texas Technological College, Lubbock, Tex., and a Ph.D. degree from Michigan State University.

Harold Davidson has been transferred from his position as instructor

and coordinator of the nursery and landscape management training course to instructor of ornamental horticulture (research). He has been a student gardener at the New York Botanic Gardens and is a graduate of Long Island Agricultural and Technical Institute, Farmingdale, N. Y. Having received his B.S. degree from the University of California and his M.S. degree from Michigan State University, Mr. Davidson is presently engaged in research leading to his Ph.D. degree. The title of his work is "The Photoperiodic Responses of Woody Plants."

A new member of the department of horticulture is Richard S. Nuttall, who has been appointed instructor and coordinator of the nursery and landscape management training

TREES—Continued

	Per 100	Per 1000
ROSE, HANSEN HEDGE		
2 to 3 ft.	\$ 7.50	\$ 65.00
18 to 24 ins.	5.50	50.00
12 to 18 ins.	4.50	40.00
6 to 12 ins.	3.00	25.00

RUSSIAN ARTEMISIA		
3 to 4 ft.	8.00	75.00
2 to 3 ft.	6.50	60.00
18 to 24 ins.	5.00	45.00
12 to 18 ins.	3.50	30.00

SILVERBERRY (Elaeagnus commutata)		
6 to 9 ins.	4.00	35.00
4 to 6 ins.	2.50	20.00

VIBURNUM LENTAGO		
6 to 12 ins.	9.00	80.00
4 to 6 ins.	4.50	50.00

VIBURNUM OPULUS		
12 to 18 ins.	10.00	90.00
6 to 12 ins.	9.00	80.00
4 to 6 ins.	5.50	50.00

WALNUT, BLACK		
2 to 3 ft.	6.50	60.00
18 to 24 ins.	4.50	40.00
12 to 18 ins.	3.50	30.00
6 to 12 ins.	2.50	20.00

FRUIT TREES

	Per 10	Per 100
APPLE		
Cortland, 1½-in. cal.	\$ 9.00	\$ 85.00
Red Delicious, 1½-in. cal.	9.00	85.00
Yellow Delicious, 1½-in. cal.	9.00	85.00
Dolgo, 1½-in. cal.	8.00	75.00
Hybl, 1½-in. cal.	9.00	85.00
McIntosh Early, 1½-in. cal.	9.00	85.00

Whitney Crab Apple, 1½-in. cal.	0.00	85.00
Yellow Transparent, 1½-in. cal.	9.00	85.00

CHERRIES		
Montmorency, 1½-in. cal.	11.00	100.00
1½-in. cal.	9.00	85.00
1½-in. cal.	7.50	70.00
1½-in. cal.	5.50	50.00
18 to 24 ins.	4.50	40.00

PLUM		
Sapa, 1½-in. cal.	8.50	80.00
Waneta, 1½-in. cal.	10.00	90.00
Waneta, 1½-in. cal.	8.50	80.00

New Paradise Asparagus, 2-1, \$2.90 per 100;
\$25.00 per 1000.

TREES

	Per 10	Per 100
Crab Apple, Hopsa, 5 to 6 ft.	\$13.00	\$120.00
Crab Apple, Hopsa, 4 to 5 ft.	10.00	90.00
Crab Apple, Red Silver, 5 to 6 ft.	16.50	150.00
Elm, American, 1¼-in. cal.	22.00	200.00
8 to 10 ft.	18.00	165.00
6 to 8 ft.	12.00	110.00
5 to 6 ft.	8.00	75.00

	Per 10	Per 100
Elm, Moline, 1¼-in. cal.	\$28.00	\$250.00
8 to 10 ft.	22.00	200.00
6 to 8 ft.	15.50	140.00
5 to 6 ft.	11.00	100.00
Hackberry, 8 to 10 ft.	30.00	275.00
6 to 8 ft.	22.00	200.00
5 to 6 ft.	12.00	110.00
Linden, Redmond—An outstanding budded Crimean variety. We have grown and tested this tree many years. Fairly fast grower, has a spread similar to Pin Oak. New wood growth turns red when matured. Has never been damaged from wind, sleet, snow, insect pests or disease. Excellent shade for lawn, park and street planting.		

	Per 10	Per 100
6 to 7 ft.	\$28.00	\$250.00
5 to 6 ft.	16.50	150.00
4 to 5 ft.	13.00	110.00
3 to 4 ft.	9.00	80.00
Poplar, Gelrica, 8 to 10 ft.	13.50	140.00
6 to 8 ft.	10.00	90.00
5 to 6 ft.	7.00	65.00
4 to 5 ft.	4.00	30.00
3 to 4 ft.	3.00	20.00
2 to 3 ft.	2.00	15.00

Poplar, Lombardy		
5 to 6 ft., br.	3.50	25.00
4 to 5 ft., br.	2.50	20.00
3 to 4 ft.	8.50	
2 to 3 ft.	6.00	

Poplar, Lytle Yellow, excellent lumber, very much like Tulip Poplar.		
6 to 8 ft.	10.00	90.00
5 to 6 ft.	7.00	65.00
4 to 5 ft.	4.00	35.00
3 to 4 ft.	3.00	20.00

Poplar, marilandica, 6 to 8 ft.	10.00	90.00
5 to 6 ft.	7.00	65.00
4 to 5 ft.	4.00	30.00
3 to 4 ft.	3.00	20.00

Poplar, missouriensis,		
8 to 10 ft.	15.50	140.00
6 to 8 ft.	10.00	90.00
5 to 6 ft.	7.00	65.00
4 to 5 ft.	4.00	30.00
3 to 4 ft.	3.00	20.00
2 to 3 ft.	2.00	15.00

Poplar, Northwest (Cottonless, cross between Balm of Gilead and Cottonwood).		
4 to 5 ft.	4.00	30.00
3 to 4 ft.	3.00	20.00
2 to 3 ft.	2.00	15.00
18 to 24 ins.	1.50	10.00
12 to 18 ins.	1.00	7.50

Poplar, Norway (Cottonless)		
6 to 8 ft.	8.00	75.00
5 to 6 ft.	5.50	50.00
4 to 5 ft.	4.00	30.00
3 to 4 ft.	3.00	20.00
18 to 24 ins.	1.50	10.00

Poplar, Sargent (Cottonless)		
6 to 6 ft.	7.00	65.00
4 to 5 ft.	4.00	30.00
3 to 4 ft.	3.00	20.00

Poplar, Serotina (Cottonless)		
6 to 8 ft.	10.00	90.00
5 to 6 ft.	7.00	65.00
4 to 5 ft.	4.00	30.00
3 to 4 ft.	3.00	20.00

TREES—Continued

	Per 10	Per 100
Poplar, Siouxland (Cottonless, rust-resistant)		
5 to 6 ft.	\$ 7.00	\$ 65.00
4 to 5 ft.	4.00	30.00
3 to 4 ft.	3.00	20.00
2 to 3 ft.	2.00	15.00
Poplar, Torrington (Cottonless)		
4 to 5 ft.	4.00	30.00
3 to 4 ft.	3.00	20.00
2 to 3 ft.	2.00	15.00

SHRUBS

	Per 10	Per 100
Cydonia japonica, 18 to 24 ins.	\$4.40	\$38.50
Cydonia japonica, 12 to 18 ins.	2.90	25.00
Lilac, japonica, 3 to 4 ft.	8.00	75.00
2 to 3 ft.	6.50	60.00
18 to 24 ins.	4.50	40.00
Lilac, Persian Red, 18 to 24 ins.	5.00	45.00

French Lilac, 2 to 3 ft.	8.50	80.00
18 to 24 ins.	6.50	60.00
12 to 18 ins.	4.50	40.00
Alphonse LaVallée, D-lilac, 2 to 3 ft., 18 to 24 ins.		

Belle de Nancy, D-rose, W-center, 18 to 24 ins., 12 to 18 ins.		
Chas. Joly, D-rich red, 2 to 3 ft., 18 to 24 ins., 12 to 18 ins.		
Chas. N. S-red, 18 to 24 ins., 12 to 18 ins.		
DeCalsne, S-azure-blue, 18 to 24 ins., 12 to 18 ins.		

Gen. Sheridan, D-white, 2 to 3 ft., 18 to 24 ins., 12 to 18 ins.		
Jacques Callot, S-violet, 18 to 24 ins., 12 to 18 ins.		
Mme. Abel Chateau, D-white, 18 to 24 ins., 12 to 18 ins.		

Michel Buchner, S-lilac, 18 to 24 ins., 12 to 18 ins.		
Fres. Grevy, D-bluish-lilac, 18 to 24 ins., 12 to 18 ins.		
Fres. Lincoln, S-blue, 18 to 24 ins., 12 to 18 ins.		

Vauban, D-lilac, bluish, 2 to 3 ft., 18 to 24 ins.		
Waldeck-Rousseau, D-lilac-pink, 18 to 24 ins., 12 to 18 ins.		
Wm. Robinson, D-reddish-purple, 18 to 24 ins., 12 to 18 ins.		

	Per 10	Per 100
Philadelphus Glacier, 2 to 3 ft.	\$6.50	\$60.00
18 to 24 ins.	5.50	50.00
Philadelphus lemoinei, 2 to 3 ft.	6.00	55.00
18 to 24 ins.	4.50	40.00

Spiraea billiardii, 18 to 24 ins.	4.50	40.00
12 to 18 ins.	2.90	25.00
Spiraea froebeli, 15 to 18 ins.	4.00	35.00
12 to 15 ins.	3.50	30.00

Spiraea multiflora, 2 to 3 ft.	6.00	55.00
18 to 24 ins.	4.50	40.00
12 to 18 ins.	2.90	25.00
Spiraea vanhouttei, 2 to 3 ft.	4.50	40.00
18 to 24 ins.	3.50	32.00
12 to 18 ins.	2.60	22.00

Viburnum opulus, 18 to 24 ins.	5.50	50.00
12 to 18 ins.	3.50	30.00

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course, replacing Mr. Davidson. He received his B.S. and M.S. degrees from Michigan State University. Mr. Nuttall formerly served the bureau of plant industry, Michigan department of agriculture, as a nursery inspector and for several years he was owner and operator of the Green Thumb Landscaping Co., Port Huron, Mich.

McKAY SUCCESS TOLD

Subject of a recent feature column in the Wisconsin State Journal, William G. McKay, president of McKay Nursery Co., Madison, Wis., is described as a businessman and civic leader who has earned the city's respect and trust.

Born 81 years ago in Milwaukee

county, Mr. McKay worked his way through business college and began his career as a machinist in Milwaukee at a wage of 75 cents a day. He entered the nursery business with his two brothers, P. J. McKay and J. M. McKay, in 1901. A few years later, upon the death of one brother and the retirement of the other, he reorganized the business as the McKay Nursery Co., with himself as president. With expansion of the business, general offices were moved to Madison over 40 years ago, from which point Mr. McKay now directs operation of the firm's 650 acres near Waterloo, which support company-owned dairy and feeding cattle herds in addition to nursery stock.

A bachelor, Mr. McKay is active in community welfare and religious

and social groups. He has been a federal jury commissioner for over 15 years and once served as a member of the Wisconsin state welfare board. He is particularly well known in Madison hospitals for his practice of sending, each spring, thousands of peonies from his nursery for distribution to the patients.

STEVE KUBIAK, Kubiak's Nursery, Pompano Beach, Fla., recently held a grand opening for the building constructed to house the nursery's new garden supply center. A director of the Broward County chapter, Florida Nurserymen and Growers Association, Mr. Kubiak will soon mark his 12th year in the nursery business at Pompano Beach.

The Place to Meet Nurserymen from all New England!



The NEW ENGLAND NURSERYMEN'S ASSN. winter meeting

February 5, 6 and 7, 1957
Hotel Kenmore, Boston, Mass.

For exhibit space, contact:

Jack Shore, Chairman of Exhibit Committee, J. Shore & Co.,
Chelsea, Mass.
Erwin W. Whitham, Secretary, R. F. D. No. 1, Andover, Conn.

NORTHERN-GROWN STOCK

LANDSCAPE-SIZE SHRUBS		
<i>Clethra alnifolia</i>	Per 10	Per 100
18 to 24 ins., clumps	\$4.00	\$35.00
2 to 3 ft., clumps	6.00	50.00
3 to 4 ft., clumps	8.00	70.00
<i>Ilex verticillata</i>		
2 to 3 ft., clumps	6.00	50.00
3 to 4 ft., clumps	7.00	60.00
<i>Viburnum cassinoides</i>		
2 to 3 ft., clumps	6.00	50.00
3 to 4 ft., clumps	8.00	70.00
<i>Viburnum dentatum</i>		
2 to 3 ft., clumps	5.00	40.00
3 to 4 ft., clumps	7.00	60.00
SUGAR MAPLES		
Unit price in quantities		
	10 to 50 to	
<i>Acer saccharum</i>	49	250
1½ to 1¾-in. cal.	\$ 4.00	\$ 3.50
1½ to 1¾-in. cal.	6.00	5.00
1½ to 2 -in. cal.	7.00	6.00
2 to 2½-in. cal.	9.00	8.00
2½ to 3 -in. cal.	12.00	11.00

CLUMP BIRCH		
<i>Paper Birch</i>	Per 10	Per 100
4 to 6 ft.,		
3 stems and up	\$30.00	
6 to 8 ft.,		
3 stems and up	40.00	
<i>Gray Birch</i>		
4 to 6 ft.,		
3 to 6 stems	25.00	\$200.00
6 to 8 ft.,		
3 to 6 stems	35.00	\$250.00

All stock is first-quality collected material except as otherwise noted. Send for complete wholesale list of Hardy Native Ferns, Lilies, Orchids, Wild Flowers, Trees, Shrubs and Evergreens. We do not have Japanese beetle.

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300 acres of choice Evergreens
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COMING EVENTS

MEETING CALENDAR

January 15—Massachusetts Nurserymen's Association, winter meeting, Hotel Kenmore, Boston, Mass.

January 20 to 22—Canadian Association of Nurserymen, 33rd annual meeting, Hotel London, London, Ont., Canada.

January 21 and 22—Idaho Nurserymen's Association, winter meeting and garden school, Basque Center, 601 Grove street, Boise, Ida.

January 21 and 22—Washington State Nurserymen's Association, winter convention, Winthrop hotel, Tacoma, Wash.

January 21 to 23—Ohio State University's annual short course for arborists, landscape gardeners and nurserymen, Neil House, Columbus, O.

January 23—Southern California nursery institute, Chemistry building, University of California at Los Angeles, Los Angeles, Calif.

January 23 and 24—Connecticut Nurserymen's Association, short course, college of agriculture, University of Connecticut, Storrs, Conn.

January 23 to 25—Ohio Nurserymen's Association, winter meeting, Neil House, Columbus, O.

January 24 and 25—Oregon Association of Nurserymen, winter convention, Multnomah hotel, Portland, Ore.

January 25—Western New York Nurserymen's Association, annual meeting, Sheraton hotel, Rochester, N. Y.

January 27 to 29—Tennessee Nurserymen's Association, annual convention, Andrew Johnson hotel, Knoxville, Tenn.

January 28 to 30—Kentucky Nurserymen's Association, winter meeting, Brown hotel, Louisville, Ky.

January 29—Delaware nurserymen's short course, Agricultural Hall, University of Delaware, Newark, Del.

January 30—Northern California nursery institute, Life Sciences building, University of California, Berkeley, Calif.

January 30 to February 1—New Jersey Association of Nurserymen, winter meeting, Chalfonte-Haddon Hall hotel, Atlantic City, N. J.

January 30 to February 1—Michigan Association of Nurserymen, annual convention, Hotel Pantlind, Grand Rapids, Mich.

February 3 to 5—Southern Nurserymen's Association, third annual winter trade meet, Hotel Biltmore, Atlanta, Ga.

February 4 and 5—National Arborist Association, annual convention, Hotel Statler, New York, N. Y.

February 5—Kalamazoo Valley Landscape and Nurserymen's Association, mid-winter educational meeting, Hotel Harris, Kalamazoo, Mich.

February 5 and 6—Oregon short course for nurserymen, florists, holly growers and landscape gardeners, Oregon State College, Corvallis, Ore.

February 5 to 7—New England Nurserymen's Association, Hotel Kenmore, Boston, Mass.

February 6—Lake County Nurserymen's Association and Lake county agricultural extension service, annual nursery school, Hellriegel's Inn, Painesville, O.

February 7 and 8—West Virginia Nurserymen's Association, winter meeting, Ruffner hotel, Charleston, W. Va.

February 13 and 14—Pennsylvania Nurserymen's Association, annual meeting, Warwick hotel, Philadelphia, Pa.

February 13 to 15—Midwestern chapter of the National Shade Tree Conference, Hotel Pfister, Milwaukee, Wis.

February 19 to 21—Nurserymen's conference, sponsored by Pennsylvania State University, University Park, Pa.

February 20—Rhode Island Nurserymen's Association, annual meeting, Johnson's Hummocks grill, Providence, R. I.

February 25 and 26—Short course for Colorado nurserymen and arborists, Student Union building, Colorado A. and M. College, Fort Collins, Colo.

February 28 and March 1—Massachusetts Nurserymen's Association, short course, Waltham field station, Waltham, Mass.

NEW JERSEY SCHEDULE

The first day's sessions of the New Jersey Association of Nurserymen's winter meeting will be held January 22 at the Hildebrecht hotel, Trenton, N. J., during New Jersey farmers' week, and the rest of the meeting will take place January 30 to February 1 at the Chalfonte-Haddon Hall hotel, Atlantic City. The recently released program follows:

JANUARY 22, AFTERNOON

"Trees You Can Live With," by Edward H. Scanlon, Edward H. Scanlon & Associates, consulting arborists, Olmsted Falls, O.

Business meeting, George Runge, Delaware Valley Nursery, Elizabeth, N. J., president, N. J. N. A., presiding. (Presentation of dues increase proposal; final action to be taken January 31 at Atlantic City.)

JANUARY 30, AFTERNOON

"New and Unusual Plants," by Dr. Francis DeVos, United States National Arboretum, Washington, D. C.

"The Liberty Hyde Bailey Memorial Fund," by Dr. G. H. M. Lawrence, Bailey Hortorium, Cornell University, Ithaca, N. Y.

JANUARY 31, MORNING

President's address, by George Runge. Committee reports and association business (final action on dues increase proposal).

"How Teamwork Builds a Better Valley," by Robert G. Struble, Brandywine Valley Associations.

JANUARY 31, AFTERNOON

Luncheon.

Presentation of plaques to past presidents.

"Report from Washington," by Curtis Porterfield, secretary, American Association of Nurserymen.

Report from Rutgers University, Dr. William E. Snyder, presiding.

"Who Sells It?," panel discussion with William P. Howe, Jr., Howe Nurseries, Pennington, N. J., moderator, and panel members Maynard du Rei, C. W. Stuart & Co., Newark, N. Y.; John Kelly, Kelly Bros. Nurseries, Dansville, N. Y., and

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February 3, 4, 5

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Terminalis (Japanese Spurge). The ideal permanent evergreen ground cover plant for shady and semi-shaded areas in all climates. Does well in sunny areas, too. Absolutely winter hardy in the most northern climates.

	Per 100	Per 1000	Per 1000 for
			5000 or more
Strong, well-rooted, 1-yr. plants; propagated in soil and peat frames with light shade...	\$5.00	\$42.50	\$40.00

Available for immediate shipment March through December. Shipments anywhere, including Canada. Good packing free. A good source of supply.

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One of the most complete collections of the better named varieties of American and English holly, 3 to 6-inch pots. Field plants, 2 to 6 ft. Send for list.

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SPRUCES? LOOKING FOR SPRUCES?

FOR — ruggedness
— hardiness
— winter warmth

FOR lasting beauty through the years
HOW ABOUT THESE?

RUGGED
DENIZENS
OF THE
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Picea engelmanni (Engelmann Spruce)

Has bluish-green to steel-blue foliage.

*3 to 6 ins., once transplanted.....	\$ 8.00	\$ 64.00
*6 to 9 ins., once transplanted.....	11.00	88.00
*9 to 12 ins., once transplanted.....	13.00	104.00

Picea excelsa (Norway Spruce)

Holds a place of deserved esteem.

12 to 15 ins., once transplanted, B.R.....	16.00	128.00
15 to 18 ins., once transplanted, B.R.....	20.00	160.00
18 to 24 ins., once transplanted, B.R.....	25.00	200.00

Picea excelsa mucronata (Dwarf Norway Spruce)

Dwarf, dense, rounded pyramid. One of the best.

6 to 9 ins., twice transplanted, B.R., specimen.....	65.00
--	-------	-------

Per 100 Per 1000

DID YOU KNOW?

That the lovely and very hardy Black Hills Spruce, a state tree of South Dakota, geographical variety of the White Spruce, is native to only an area in South Dakota?

Picea excelsa pygmaea (Pygmy Spruce)

Exceedingly dense, dark green, dwarf conifer.

*1 to 3 ins., once transplanted.....	15.00	120.00
--------------------------------------	-------	--------

Picea excelsa sherwoodii (Sherwood's Multnomah Spruce)

Wonderful dwarf, compact, irregular, flattened globe.

*3 to 6 ins., once transplanted.....	18.00	144.00
*6 to 9 ins., once transplanted.....	25.00	200.00

Picea glauca albertiana (Alberta Spruce)

Narrow pyramidal habit, dark green foliage.

*1 to 3 ins., not transplanted.....	4.00	32.00
-------------------------------------	------	-------

Picea glauca densata (Black Hills Spruce)

A handsome, hardy tree.

*1 to 3 ins., not transplanted.....	4.00	32.00
*3 to 6 ins., not transplanted.....	5.00	40.00

DID YOU KNOW?

That Kalmiopsis, one of the rarest and most beautiful of the broad-leaved evergreens, rivaling azaleas and kalmia in beauty, growing in probably the most fantastic evergreen area in North America, has successfully defied all attempts at domestication.

Picea pungens (Colorado Spruce) (Green)

One of the most desirable of the spruces.

*3 to 6 ins., once transplanted.....	11.00	88.00
*6 to 9 ins., once transplanted.....	15.00	120.00

The prices here quoted include expert packing and delivery of lining-out stock to you, all shipping charges prepaid to any point in the United States, Canada and Alaska. Lining-out stock is marked with an asterisk*. The prices on B.R. stock are F.O.B. Portland. No packing charge on any stock.

25 at 100 rate

250 at 1000 rate



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Evergreens - PROPAGATORS AND GROWERS
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Wholesale list available—trade only.
(It contains complete descriptions.)

CORBETT, ORE.

Peter Costich, Hicks Nurseries, Westbury, N. Y.

Annual banquet.

FEBRUARY 1, MORNING

"Landscape Pitfalls," by Alan Dalsimer, Dalsimer, Inc., Cedarhurst, L. I., N. Y.
Election and installation of officers.

DELAWARE COURSE PLAN

Speakers from commercial firms will join faculty members of the University of Delaware and Pennsylvania State University on the program of the Delaware nurserymen's short course, to be held January 29 at Agricultural hall, University of Delaware, Newark, Del.

First speaker of the morning session will be Dr. Dale Bray, associate entomologist, F. A. Bartlett Tree Expert Co., Osterville, Mass., who will discuss "Pest Control in Ornamental Plants," after which Prof. E. M. Rahn, University of Delaware, will present "Some Promising Herbicides for Use with Nursery Stock." A speaker has not yet been announced for the topic, "Use of Plastics for Plant-Growing Structures."

Opening the afternoon session, Owen B. Schmidt, F. D. Moore & Sons, Inc., Narbeth, Pa., will speak on "Training Plants Old and New for Landscape Effects." Prof. W. H. Wilson, department of landscape architecture, Pennsylvania State University, University Park, Pa., will then outline some principles of "Landscape Design for Outdoor Living for the Small Property," and the course will be concluded by Dr. C. W. Dunham, University of Delaware, whose subject is "Propagation of Flowering Dogwood."

MICHIGAN CONVENTION

Registration and informal social gatherings will mark the first day of the Michigan Association of Nurserymen's convention, which will be held at the Hotel Pantlind, Grand Rapids, Mich., January 30 to February 1. The convention program continues as follows:

JANUARY 31, MORNING

President's welcome, by J. Joseph Poleo, Ilgenfritz Nurseries, Inc., Detroit.

"The New Look with Michigan Association's Executive Secretary," by Kenneth VanAtta.

"Plant Patents and Trade-Marks—What They Can Do for You," by John Siebenthaler, Siebenthaler Co., Dayton, O.

Panel discussion—"Extending the Season for Moving Shrubs and Shade Trees."

Moderator: William Poleo; panel members: Vernon Begick, Begick Nursery, Bay City; Arnold Folker, Folker's Nursery Co., Monroe; Peter Christensen, Leon R. Christensen, Landscape Architect, Livonia, and George Young, George E. Young Nursery, Oak Park.

"The Government's Relation with the Commercial Nursery Industry," by C. A.

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...and you'll find the **VIGORO** Line
your best bet for **SALES** and **PROFITS!**

**Now—more than ever before
you can buy VIGORO right!**

Our attractive new policy enables you to earn *top discounts* even if your volume is not the biggest. Your Swift Field Representative has all the facts. He's in business to help your business . . . and he's selling a line that's backed by years of consumer confidence.

Easier to SELL with NEW

Advertising and Merchandising!

The *complete* VIGORO line of gardening aids will be backed by the biggest ad campaign ever. Reader's Digest, Saturday Evening Post are just *two* of the publications that will sell 'em. PLUS—display material that pinpoints *your* area—"made right for the soils and gardening conditions in your area."



Golden VIGORO
Complete Lawn
Food

Proved on over 3 billion sq. ft. of lawn. Safe, non-burning—lasts longer, gives steady feeding for months.



VIGORO
Complete
Plant Food

Top-seller for years—outsells the next brand by 6 to 1! Ideal for flowers, shrubs, vegetables, trees.



VIGORO
Complete
ROSE FOOD

New! Special formula provides needed nutrients for better, and more, blooms. Nothing like it ever before!



Instant VIGORO
Complete water
soluble plant
food

Provides fastest possible feeding action . . . nourishes plants through both leaves and roots.



The VIGORO Family of Gardening Aids

Golden Vigoro Complete Lawn Food
Vigoro Complete Plant Food
Instant Vigoro Complete Water Soluble Plant Food
Special Vigoro for Camellias & Azaleas

Vigoro Complete Rose Food
Vigoro Plus Chlordane
End-o-Pest Garden Dust
End-o-Pest Rose Dust
End-o-Pest Garden Spray
End-o-Pest Ant & Lawn Insect Dust

End-o-Pest Ant & Lawn Insect Spray
End-o-Pest Tree Spray
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Boyer, chief, division of plant industry, Michigan department of agriculture, Lansing.

JANUARY 31, AFTERNOON

Panel discussion — "Weather Bulletin: No Rain; What about Water?" Moderator: Louis Bookwalter, Berryhill Nursery Co., Springfield, O.; panel members: William Cole, Cole Nursery Co., Painesville, O.; Paul Armintrout, Armintrout's Evergreen Nursery, Allegan; Glen Davis, R. M. Kellogg Co., Three Rivers; Glen Trommeter, and William Newhouse.

"More Merchandising for Bigger, Better Retail Business," by Jack Schneider.

"Regional Organization in the Michigan Nursery Industry," by John Light, Light's Tree Co., Richland.

Panel discussion — "Fertilizer: Advantages, Advice, Alibis." Moderator: Harold Hicks, Cottage Gardens, St. Joseph; panel members: James Ilgenfritz, Ilgenfritz Nurseries, Inc., Monroe; Evan J. Evans, Toledo, O.; Eugene J. Heuser, Hill Top Orchards & Nursery, Hartford; Henry Kleine, Newport Nursery Co., Newport, and James Matthews.

Annual banquet.

FEBRUARY 1, MORNING

Election of officers.

Panel discussion — "Right Research Right Now for the Nursery Industry." Moderator: Harold Tukey, department of horticulture, Michigan State University; panel members: Harold Hunziker, Hunziker & Sons, Niles; Dr. Roy Marshall, M. S. U.; Robert Hobbs, Hobbs & Sons, Inc., Bridgeport, Ind., and Louis Flannery, Flannery Nursery, Birmingham.

"Two Serious Pests that Retard and Kill Ornamentals," by Ray Hutson, department of entomology, Michigan State University.

"The American Association of Nurserymen: Past, Present and Future," by Arthur Watson, Arthur L. Watson Nurseries, Grand Rapids.

Annual meeting, Michigan chapter, A. A. N.; election of delegates.

"The A. A. N. Today," by E. E. Meredith, administrative assistant, A. A. N., Washington, D. C.

New member panel discussion—"This Is My Business." Moderator: Henry Tepper; panel members: Mrs. Jane Smith, Lansing; Ted Grever, Charles Zollar, Fred Hoffman and John Crampton.

CANADIAN CONVENTION

The program for the 34th annual convention of the Canadian Association of Nurserymen, which will be held January 20 to 22 at the Hotel London, London, Ont., schedules meetings of standing and special committees for the afternoon on Sunday, January 20, and a directors' meeting in the evening.

The first topic of the convention, "Propagation—Storage of Nursery Stock," will be introduced Monday morning by Dr. John Mahlstede, Iowa State College, Ames, Ia., and discussed further in a question period which follows. Afternoon sessions are devoted to reports by President A. B. Luke, Hudson, Que.; Secretary-treasurer J. R. Burns, Ottawa, Ont., and public relations chairman of the

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**Excellent Root
Systems, Hardy
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Grown at High Altitude—In the Heart of the Original Pine Forests

WHOLESALE PRICES

PINE SEEDLINGS

	Per 100 Per 1000	
Scotch Pine, Riga		
2-0, 2 to 4 ins.	\$ 2.50	\$12.50
2-0, 4 to 8 ins.	5.00	25.00
3-0, 8 to 16 ins.	7.00	35.00

Scotch Pine, West Baltic		
3-0, 8 to 16 ins.	7.00	35.00

Scotch Pine, German		
2-0, 2 to 4 ins.	2.50	12.50
2-0, 5 to 10 ins.	6.00	30.00

Scotch Pine, French		
2-0, 2 to 4 ins.	2.50	12.50
2-0, 4 to 8 ins.	5.00	25.00

NOTE: In order to satisfy the individual demands of our many customers, we are offering the above strains of Scotch Pine. They are all highly recommended by our seed suppliers for good color, straight stems, compactness and fast-growing characteristics. They are grown from the best seed obtainable, under the best growing conditions, to develop the healthiest seedlings possible to withstand drought, disease and insect damage.

American Red Pine		
2-0, 2 to 4 ins.	2.50	12.50
3-0, 5 to 9 ins.	4.00	20.00

Austrian Pine		
2-0, 3 to 4 ins.	3.00	15.00
2-0, 4 to 8 ins.	5.00	25.00
3-0, 8 to 14 ins.	8.00	40.00

White Pine		
2-0, 3 to 6 ins.	4.00	20.00
3-0, 6 to 9 ins.	6.00	30.00
4-0, 8 to 16 ins.	12.00	60.00

Ponderosa Pine		
4-0, 6 to 12 ins.	4.00	20.00

Mugho Pine (True Dwarf Tyrolean)		
2-0, 2 to 4 ins.	3.00	15.00
3-0, 4 to 6 ins.	5.00	25.00

(The 3-0 Mugho Pine is thin in bed, sheared twice, well-branched and suitable for lining-out stock. Order early as stock is limited.)

SPRUCE SEEDLINGS

	Per 100 Per 1000	
Norway Spruce		
2-0, 3 to 5 ins.	\$ 4.00	\$20.00
2-0, 5 to 8 ins.	5.00	25.00
3-0, 6 to 12 ins.	6.00	30.00
3-0, 12 to 16 ins.	10.00	50.00

Colorado Blue Spruce, from select seed. Color very good.		
2-0, 2 to 4 ins.	3.00	15.00
2-0, 4 to 8 ins.	6.00	30.00
3-0, 3 to 5 ins.	4.00	20.00
3-0, 5 to 9 ins.	7.00	35.00
3-0, 6 to 12 ins.	10.00	50.00

White Spruce		
2-0, 3 to 5 ins.	4.00	20.00
3-0, 5 to 9 ins.	6.00	30.00
4-0, 9 to 14 ins.	14.00	70.00

Engelmann Spruce		
2-0, 2 to 4 ins.	3.00	15.00
2-0, 4 to 6 ins.	5.00	25.00

Black Spruce (Mariana)		
2-0, 3 to 6 ins.	3.00	15.00
2-0, 6 to 12 ins.	5.00	25.00

Douglas Fir (Glaucia)		
3-0, 3 to 5 ins.	4.00	20.00
3-0, 5 to 9 ins.	7.00	35.00

Balsam Fir and Concolor Fir not available this year.

European Larch		
2-0, 4 to 6 ins.	3.00	15.00
2-0, 6 to 12 ins.	4.00	20.00

Carolina Hemlock		
4-0, 10 to 20 ins.	20.00	

Canadian Hemlock		
2-0, 2 to 4 ins.	5.00	25.00
2-0, 4 to 8 ins.	7.00	35.00
4-0, 10 to 20 ins.	20.00	

NOTE: 50 of one kind and size at the 100 rate, 500 of one kind and size at the 1000 rate.

CHINESE CHESTNUT SEEDLINGS

(Blight-resistant)

	10 lots	100 lots	1000 lots
Chinese Chestnut (Ching Chow Strain)			
1-0, 8 to 16 ins.	\$0.30 ea.	\$0.25 ea.	\$0.20 ea.
Japanese Yew (Taxus cuspidata)			
2-0, 4 to 8 ins.	\$25.00 per 100.	(Sold in 10 lots or more.)	

TRANSPLANTS

	Per 50	Per 100	Per 1000
Colorado Blue Spruce			
2-2, 6 to 12 ins.	\$0.20 ea.	\$0.15 ea.	\$120.00
White Spruce			
2-3, 9 to 16 ins.	.17 ea.	.15 ea.	

5% discount on 25,000 or more of combined species.
(Exclusive of seedlings \$15.00 per 1000 and under.)

We guarantee all stock represented herein as to size and quality, or your money cheerfully refunded.

The name SCHROTH stands for the best. Your order will convince you. Make a Christmas tree planting this season. Scotch is the best bet. Do not delay. Send for complete listing and terms.

All stock offered subject to prior sale.

SCHROTH'S NURSERY

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FIELD-GROWN LINING-OUT STOCK

Transplanted stock grown in open field beds.

	Each	Each
	Per	Per
	100	1000
Azalea mollis (Chinese Azalea)		
6 to 8 ins., 2-yr., T.....	\$0.22	\$0.18
8 to 10 ins., 2-yr., T.....	.35	.30
10 to 12 ins., 3-yr., T.....	.65	.60
Azalea, Ghent (pontica), pastel shades		
5 to 8 ins., 3-yr., T.....	.25	.20
8 to 12 ins., 3-yr., T.....	.45	.40
Azalea schlippenbachii , bright pink		
2-yr., field bed, T.....	.28	.25
3-yr., field bed, T.....	.35	.32
Buxus sempervirens welleri (Weller's Hardy Boxwood)		
6 to 8 ins., 2-yr., T.....	.35	.32
8 to 10 ins., 3-yr., T.....	.45	.40
Chamaecyparis filifera aurea		
6 to 8 ins., 2-yr., T.....	.35	.30
8 to 10 ins., 3-yr., T.....	.45	.40
Chamaecyparis lawsoniana allumi		
8 to 10 ins., 2-yr., T.....	.35	.30
10 to 15 ins., 3-yr., T.....	.45	.40
Chamaecyparis plumosa aurea		
8 to 10 ins., 3-yr., T.....	.40	.35
10 to 15 ins., 3-yr., T.....	.50	.45
Euonymus fortunei carrierei		
12 to 15 ins., 2-yr., T.....	.35	.30
Euonymus fortunei coloratus		
Procumbent, broad-leaved creeper.		
6 to 10 ins., 2-yr., T.....	.25	.20
12 to 15 ins., 3-yr., T.....	.35	.30
Euonymus fortunei erectus (Big-leaved Winter Creeper)		
10 to 12 ins., 2-yr., T.....	.25	.20
12 to 15 ins., 3-yr., T.....	.35	.30
Euonymus radicans coloratus		
Small-leaved, procumbent creeper.		
10 to 15 ins., 2-yr., T.....	.25	.20
12 to 15 ins., 3-yr., T.....	.35	.30
Euonymus radicans vegetus		
8 to 12 ins., 2-yr., T.....	.30	.25
10 to 15 ins., 3-yr., T.....	.45	.40
Hex crenata (Japanese Holly), pyramidal		
8 to 10 ins., 2-yr., T.....	.35	.30
10 to 12 ins., 3-yr., T.....	.45	.40
Hex crenata convexa (bullata)		
8 to 10 ins., 2-yr., T.....	.38	.35
10 to 12 ins., 3-yr., T.....	.48	.45
12 to 15 ins., 3-yr., T.....	.65	.60

Hex crenata hetzi		
An improved convexa		
(Bullata) type.		
8 to 10 ins., 2-yr., T.....	\$0.40	\$0.38
10 to 15 ins., 3-yr., T.....	.55	.50

Hex rotundifolia (Round-leaved Japanese Holly)		
8 to 10 ins., 2-yr., T.....	.38	.35
10 to 12 ins., 3-yr., T.....	.48	.45
12 to 15 ins., 3-yr., T.....	.70	.60
Juniper, Andorra (Purple Andorra)		
8 to 10 ins., 3-yr., T.....	.45	.40
10 to 15 ins., 3-yr., T.....	.50	.45

SEEDLINGS

Christmas Tree Plantation

	Per	Per	Per
	100	1000	10000
Blue Spruce (<i>Picea pungens</i>)			
4 to 8 ins., 2-yr., S.....	\$10.00	\$40.00	.....
3 to 4 ins., 2-yr., S.....	8.00	30.00	\$25.00
2 to 3 ins., 2-yr., S.....	6.00	25.00	20.00
Concolor Fir			
2 to 5 ins., 2-yr., S.....	12.00	50.00	.....
Norway Spruce			
6 to 10 ins., 2-yr., S.....	8.00	28.00	25.00
4 to 6 ins., 2-yr., S.....	6.00	22.00	20.00
2 to 4 ins., 2-yr., S.....	5.00	18.00	15.00

Scotch Pine			
8 to 12 ins., 2-yr., S.....	8.00	30.00	.....
4 to 8 ins., 2-yr., S.....	6.00	25.00	20.00
2 to 4 ins., 2-yr., S.....	5.00	20.00	18.00
2 to 6 ins., 3-yr., T.....	10.00	40.00	30.00
Austrian Pine			
3 to 6 ins., 2-yr., S.....	8.00	25.00	20.00
2 to 3 ins., 2-yr., S.....	6.00	20.00	18.00
2 to 6 ins., 3-yr., T.....	10.00	50.00	.....

(Once transplanted—see elsewhere on this list.)
100 at 100 rate; 1000 at 1000 rate;
5000 and up at 10,000 rate.

	Each	Each
	Per	Per
	100	1000
Juniperus glauca hetzi (Hetz Juniper)		
10 to 12 ins., 3-yr., T.....	\$0.45	\$0.38
12 to 15 ins., 3-yr., T.....	.55	.45
15 to 18 ins., 3-yr., T.....	.70	.....
Juniperus communis hibernica fastigiata (Compact Irish Juniper)		
12 to 15 ins., 3-yr., T.....	.45	.40
15 to 18 ins., 3-yr., T.....	.55	.50

Juniperus pfitzeriana compacta (Nelson's variety). Gray-blue Pfitzer. Shears compactly.		
6 to 8 ins., 1-yr., T.....	\$0.35	\$0.30
8 to 10 ins., 2-yr., T.....	.45	.40
10 to 15 ins., 3-yr., T.....	.65	.60

Juniperus pfitzeriana , regular		
8 to 10 ins., 2-yr., T.....	.45	.40
10 to 15 ins., 3-yr., T.....	.55	.50
Juniperus pfitzeriana aurea		
8 to 10 ins., 2-yr., T.....	.45	.40
10 to 15 ins., 3-yr., T.....	.65	.60
Juniperus stricta		
4 to 8 ins., 1-yr., T.....	.35	.32
8 to 12 ins., 3-yr., T.....	.45	.42

Lining-out Stock. 25 at the 100 Rate. 300 at the 1000 Rate.

TERMS: Free packing for cash with order, otherwise 1/3 deposit with order and balance C.O.D. Packing at cost. All shipments by railway express.

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association, J. E. Shuttleworth, London, Ont., and the showing of a promotional film on gardening. The president's reception will precede the annual banquet in the evening.

Scheduled for Tuesday morning is a business meeting, at which reports of committees will be heard and officers for the coming year will be elected.

W. H. Perron, Montreal, Que., will open the final afternoon session with a survey of "Association Activities," after which a debate, "Resolved: That a General Increase in Prices Will Benefit the Industry," will be held. Dr. Mahlstede appears again to speak on "Merchandising Nursery Stock." An open discussion on the "General Welfare of the Nursery Industry" concludes the convention program.

Immediately after the general sessions of the convention, a directors' meeting will be held.

WESTERN NEW YORK

A business meeting, first item on the program of the 1957 meeting of the Western New York Nurserymen's Association to be held January 25 at the Hotel Sheraton, Rochester, N. Y., includes a report by the association's secretary-treasurer, William R. Boocock, Four Winds Nursery, Inc., Buffalo, and reports on the Cornell short course and the eastern nurserymen's convention. Other morning talks will be given by Ellis E. Meredith, administrative assistant, American Association of Nurserymen, and Dr. John Seeley, head of the department of floriculture and ornamental horticulture, college of agriculture, Cornell University, Ithaca, N. Y.

In the afternoon session, Harold G. Seyler, treasurer, Farr Nursery Co., Weiser Park, Pa., will deliver an address titled "Windmills and Kitchen Sinks." Afterward a report

will be presented by Edwin Kirk, director of the bureau of plant industry, state of New York. The election of officers and directors will be held immediately preceding the final item on the program, a motion picture on landscape work.

KALAMAZOO COURSE

The Kalamazoo Valley Landscape and Nurserymen's Association announcing the program for its mid-winter educational meeting to be held February 5 at the Hotel Harris, Kalamazoo, Mich., lists Jack Siebenthaler, the Siebenthaler Co., Dayton, O., as the first speaker, with "This Good Business" as his topic.

Irwin J. Mathews, Mathews Nursery & Seed Co., Gary, Ind., is scheduled to give a talk entitled "If I Were You." A panel discussion, moderated by Richard S. Nuttall, Michigan State University, East Lansing,

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Save 20% on popular

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ART-POTS

The containers that "show off" your plants...sell them faster, protect them longer

New manufacturing facilities now enable us to offer genuine Keiding "Art Pots" at new low prices...without a reduction in quality. These are the same standard Keiding designs, same weight, sizes, same power-molded self-airing containers that are popular wherever nursery stock is sold. In addition to price savings you'll save stock and time also, because you just leave plants in the containers when you transplant. No need to expose roots or to incur transplant shock. Plants awaiting sale flourish and look better because the self-airing pot walls permit air and moisture to reach the roots naturally.

SIZES: 5x5, 6x6, 8x8, 10x10, 12x11, 14x13. Rose pots 7x9. Stock up now. Complete data and new, low prices on request. Write



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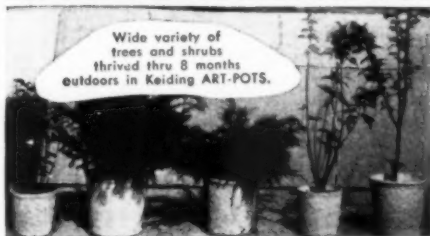
ROSE POT

Designed especially for roses, this new rose pot is extra deep, ideal in size and pleasingly proportioned. Sturdily made from genuine Keiding "breather-type" pulp fiber.

"Spring-to-Fall" PROOF:



Keiding ART-POTS outdoors in Brown Deer Nurseries (Halton & Hunkel Co.) growing-yard, March to October, still have eye-appeal that attracts sales!



Wide variety of trees and shrubs thrived thru 8 months outdoors in Keiding ART-POTS.

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GRAFTED STOCK FOR SPRING, 1957, DELIVERY

Grafts are normally ready for shipment after April 15. Since there is a possibility of damage by late spring frost, kindly give a shipping date when you feel it is safe to plant without frost injury.

	Per 10	Per 100		Per 10	Per 100
<i>Acer palmatum atropurpureum</i>	\$7.50	\$65.00	<i>Juniperus virginiana burki</i>	\$6.50	\$55.00
<i>Acer palmatum dissectum</i>			<i>Juniperus virginiana canaerti</i>	6.50	55.00
<i>atropurpureum</i>	7.50	65.00	<i>Juniperus virginiana elegantissima</i>	6.50	55.00
<i>Acer rubrum columnare</i>	7.50	65.00	<i>Juniperus virginiana glauca</i>	6.50	55.00
<i>Acer saccharum monumentale</i>	7.50	65.00	<i>Juniperus virginiana globosa</i>	6.50	55.00
<i>Cedrus atlantica glauca</i>	7.50	65.00	<i>Juniperus virginiana kosteriana</i>	6.50	55.00
<i>Cornus florida alba plena</i>	6.50	55.00	<i>Juniperus virginiana schottii</i>	6.50	55.00
<i>Cornus florida rubra</i>	6.50	55.00	<i>Juniperus virginiana pyramidiformis</i>		
<i>Cornus florida rubra Prosser</i>	7.50	65.00	<i>hillii</i>	6.50	55.00
<i>Cornus kousa chinensis</i>	6.50	55.00	<i>Magnolia rustica rubra</i>	7.50	65.00
<i>Fagus sylvatica riversi</i>	6.50	55.00	<i>Magnolia sieboldi parviflora</i>	7.50	65.00
<i>Ilex opaca femina</i>	7.50	65.00	<i>Magnolia soulangeana</i>	7.50	65.00
(Our selection of the following named varieties):			<i>Magnolia soulangeana nigra</i>	7.50	65.00
Arden	Joyce		<i>Magnolia stellata</i>	7.50	65.00
Cheerful	Lake City		<i>Magnolia stellata rubra</i>	7.50	65.00
Christmas Tide	Mae		<i>Magnolia stellata Water Lily</i>	7.50	65.00
Delia Bradley	Manig		<i>*Pinus cembra</i>	7.00	60.00
Farage	Miss Helen		<i>Thuja occidentalis douglasi spiralis</i>	5.50	45.00
Hookstraw (Old Heavy Berry)	Osa and Richards		<i>Thuja occidentalis elegantissima</i>	5.50	45.00
<i>Ilex opaca mascula</i>	7.50	65.00	<i>Thuja occidentalis lutea Mary Corey</i>	5.50	45.00
<i>Juniperus chinensis columnaris glauca</i>	6.50	55.00	<i>Thuja occidentalis lutea Geo. Peabody</i>	5.50	45.00
<i>Juniperus chinensis columnaris viridis</i>	6.50	55.00	<i>Thuja occidentalis nigra</i>	5.50	45.00
<i>Juniperus chinensis keteleeri</i>	6.50	55.00	<i>Thuja occidentalis pyramidalis</i>	5.50	45.00
<i>Juniperus chinensis neoboricensis</i>	6.50	55.00	<i>Thuja occidentalis rosenthalii</i>	5.50	45.00
<i>Juniperus chinensis sargentii</i>	6.50	55.00	<i>Thuja occidentalis wareana (sibirica)</i>	5.50	45.00
<i>Juniperus chinensis sargentii glauca</i>	6.50	55.00	<i>Thuja orientalis aurea nana</i>	5.50	45.00
<i>Juniperus sabina Von Ehron</i>	6.50	55.00	<i>Thuja orientalis conspicua</i>	5.50	45.00
<i>Juniperus squamata meyeri</i>	6.50	55.00	<i>Thuja orientalis elegantissima</i>	5.50	45.00
			<i>Tsuga canadensis pendula</i>	6.50	55.00

*Five-needle pines cannot be shipped in the following states: Arizona, California, Colorado, Georgia, Kentucky, New Mexico, Nevada, South Carolina and Tennessee.

Due to handling costs, orders for less than \$10.00 cannot be accepted.

HESS' NURSERIES

P. O. Box No. 788
MOUNTAIN VIEW, N. J.

will take up the following subjects: Soils and fertilizers, custom spraying, perennials and lawn building and care. Panel members will be James Porter, extension specialist in horticulture, M. S. U.; John Light, Light's Tree Co., Richland; Jack Vermuelen, Weller Nurseries Co., Inc., Holland, and Ernest Durrant, Durrant Nurseries, Grand Rapids, all of Michigan.

OHIO WINTER SCHOOL

The Cuyahoga County (Ohio) Nurserymen's Association and the Cuyahoga county agricultural extension service announce that the annual winter nurserymen's school which they sponsor jointly will be held this year at the Lake Shore Country Club, Cleveland, O., February 7.

Included in the program is a discussion of "Selection and Varieties of New Plant Materials," presented jointly by Louis Lipp, Holden Arboretum, Mentor, O., and a member of the faculty of Ohio State University, Columbus. Donald Reichert, bureau of workmen's compensation, state of Ohio, and Arthur Roski, of a Cleveland insurance agency, will explain various aspects of industrial insurance. Dr. R. B. Neiswander and Dr. H. A. Runnels, of Ohio agri-

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IN WIDE ASSORTMENT

Hardy Azaleas, Pink Dogwood, Jap. Red Maples, Old English Boxwood, Lilacs (French Hyb.), Evergreens, etc., in 1, 2 and 3-yr. transplants, at competitive prices. Write for list.

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DEERFIELD STREET P. O., N. J.

RED BARBERRY

2-yr. Seedlings

We have about 50,000 nice plants to offer in 6 to 9, 9 to 12, 12 to 18 and 18 to 24 ins.

These are of very dark color, bushy material in the larger sizes. The two larger grades are good for mail orders.

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NEW LONDON, CONN.

AZALEAS AND HEDGE PLANTS

Splendid stock.

Write for Price List.

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KOSTER NURSERY

BRIDGETON, N. J.

Exceptionally fine 2-year-old rhododendrons; also rhododendron liners. Available spring, 1957.

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- Quality Nursery Stock
- Lining-Out Stock
- Root-Thru Plant Pots

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8 miles north of Columbus, Miss., 1 mile east of Highway 45.

FIELD-GROWN AND POTTED LINERS

	Each per 1000 rate
Biota Bakeri (sold out)	
Biota Bonita , upright	
Biota Bonita Globe	
Biota Blue Spire	
Biota Blue Cone	
2 1/4-in. rose pots, 6 to 8 ins.	15c
2 1/4-in. rose pots, 8 to 10 ins.	17 1/2c
Biota Aurea Nana Conspicua	
2 1/4-in. rose pots	22c
Thuja Woodwardi Globe , transplanted from 2 1/4-in. rose pots to field (sold out).	
2-YR. POTTED LINERS	
Biota Bonita , upright	
2 1/4-in. rose pots	22c
Biota Tibbsi , 2 1/4-in. rose pots	22c
Biota Blue Cone , 2 1/4-in. rose pots	22c
POTTED JUNIPER LINERS	
Burki , 2 1/4-in. rose pots (sold out).	
Keteleeri , 2 1/4-in. rose pots (sold out).	

BROAD-LEAVED EVERGREENS

	Each per 1000 rate
Ilex Cornuta Burfordi , 2 1/4-in. rose pots	18c
Ilex Crenata Rotundifolia , 2 1/4-in. rose pots	15c
Ilex Crenata Rotundifolia , 2-yr., well-br. 2 1/4-in. rose pots	18c
Ilex Opaca East Palatka , in 2 1/4-in. rose pots	
8 to 10 ins.	12c
10 to 12 ins. (sold out).	
12 to 15 ins. (sold out).	
Ligustrum Lucidum Compactum , 2 1/4-in. rose pots	
6 to 8 ins.	10c
8 to 10 ins.	12c
Ligustrum Lucidum Compactum , field-grown	
10 to 12 ins.	10c
Japanese Privet , 2-yr., field-grown, per 1000, \$50.00	

FIELD-GROWN JUNIPER LINERS

Andorra	
6 to 8 ins.	8c
8 to 10 ins.	12c
10 to 12 ins.	16c
Ashfordi , 1-yr., field-grown	
6 to 8 ins.	8c
8 to 10 ins.	10c
10 to 12 ins.	12c
Ashfordi , 2-yr., field-grown	
10 to 12 ins.	14c
12 to 15 ins.	16c
Canadian Golden Depressa , 1-yr., field-grown	
6 to 8 ins.	15c
Canadian Golden Depressa , 2-yr., field-grown	
6 to 8 ins.	17c
8 to 10 ins.	20c
Compact Pfitzer , 1-yr., field-grown	
6 to 8 ins.	12c
8 to 10 ins.	16c
Compact English , 1-yr., field-grown	
8 to 10 ins.	8c
10 to 12 ins.	12c
Compact English , 2-yr., field-grown	
10 to 12 ins.	14c
12 to 15 ins.	16c
15 to 18 ins.	18c
Greek , 1-yr., field-grown	
6 to 8 ins.	10c
8 to 10 ins.	12c
10 to 12 ins.	15c
Hetzl Glauca , 1-yr., field-grown	
6 to 8 ins.	10c
8 to 10 ins.	12c
10 to 12 ins.	15c

Irish Fastigiata , 1-yr., field-grown	
6 to 8 ins.	8c
8 to 10 ins.	10c
10 to 12 ins.	12c
Irish Fastigiata , 2-yr., field-grown	
12 to 15 ins.	15c
15 to 18 ins.	18c
Kiyonoi , 1-yr., field-grown	
8 to 12 ins.	10c
Kiyonoi , 2-yr., field-grown	
15 to 18 ins.	15c
Polish , 1-yr., field-grown	
6 to 8 ins.	8c
Polish , 2-yr., field-grown	
8 to 10 ins.	10c
10 to 12 ins.	12c
Pfitzer , 1-yr., field-grown	
6 to 8 ins.	14c
8 to 10 ins.	16c
10 to 12 ins.	18c
Swedish , 1-yr., field-grown	
8 to 10 ins.	10c
Swedish , 2-yr., field-grown	
10 to 12 ins.	15c
12 to 15 ins.	18c
Savin , 1-yr., field-grown	
6 to 8 ins.	8c
8 to 10 ins.	10c
Savin , 2-yr., field-grown	
10 to 12 ins.	12 1/2c
12 to 15 ins.	15c
Von Ehron , 1-yr., field-grown	
6 to 8 ins.	10c
8 to 10 ins.	12 1/2c
10 to 12 ins.	15c
Von Ehron , 2-yr., field-grown	
10 to 12 ins.	17c
12 to 15 ins.	20c

Terms: 2% discount for cash with order, free packing. Add 2c for each plant on orders of less than 250. C.O.D. orders must be accompanied by 25% of the purchase amount. A deposit of 25% will hold order for winter and spring delivery. Price F.O.B. nursery. We keep our varieties true to name as labeled and we will replace, upon proper proof, any stock that may prove otherwise, free of charge, or refund the amount paid for stock, but it is mutually agreed that we shall not be liable for any amount greater than the purchase price paid us. No claims will be considered unless made in writing within ten days after receipt of goods. All orders accepted subject to prior sales of stock or crop injury or loss from causes beyond our control.

Samples Will Be Mailed on Request at 15c Each



"Our dealings with C. R. Burr & Co. have always been most satisfactory—quality plants and excellent service. Quality comes from know-how and service is people. Burr has both—abundantly!"

*Mr. Richard Dennis,
The Family Tree,
West Roxbury, Mass.*

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1. Plants of the highest quality.
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cultural experiment station, will discuss "New Developments in Insect and Disease Control." Dr. L. C. Chadwick, of Ohio State University, will speak on "Pruning Practices, Good and Bad," and will join James Caldwell, also from the university, to present "New Research and Nursery Practices."

SHADE TREE PROGRAM

The 12th annual meeting of the midwest chapter of the National Shade Tree Conference will be held February 13 to 15 at the Pfister hotel, Milwaukee, Wis. The first paper in the educational program will be presented Wednesday morning, February 13. After presentation of each paper there will be a period for discussion. Additional opportunity for discussion will be provided in the plant clinic session, to be held Friday morning.

In the educational program, Dr. Paul E. Tilford, executive secretary of National Arborist Association, Inc., Wooster, Mass., will speak on "Growing Up,"; Luther E. Lockwood, Public Service Co., Maywood, Ill., will discuss "Trees and Utility Wires," and Charles S. Walters, department of forestry, University of Illinois, Urbana, will give "A Progress Report on the Use of Chemicals in Burning Hardwood Tree Stumps."

"Brush Control, Past, Present and Future" will be outlined by Homer L. Jacobs, vice-president, Davey Tree Expert Co., Kent, O. "Use of Radioactive Isotopes in Tree Disease Research" will be discussed by Dr. James E. Kuntz, department of plant pathology, University of Wisconsin, Madison, Wis.

Other talks on the program are an "Evaluation of Mist Blowing and Sanitation in Dutch Elm Disease Control Programs," by Prof. J. G. Matthysse, department of entomology, Cornell University agricultural experiment station, Ithaca, N. Y.; an address on "Tree Anatomy and Function," by W. H. Bragonier, department of botany and plant pathology, Iowa State College, Ames, Ia., and a discussion by E. S. McDonough, department of biology, Marquette University, Milwaukee, Wis., of "Natural Occurring Animycotics in Relation to Wood Decay."

COLORADO SHORT COURSE

The annual short course for Colorado nurserymen and arborists to be held at Colorado A. and M. College, Fort Collins, Colo., has been scheduled for February 25 and 26 in the Student Union on the college cam-

BROWNELL SUB ZERO ROSES



HELEN HAYES

This semidouble, luminous, peaches-and-cream colored hybrid tea, with its outstanding glossy foliage, practically free from thorns, has been the sensation of the display gardens this season. Write for colored catalogs of Hybrid Teas, Climbers, Creepers and the new Ever-blooming Pillars.

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BIRD VITA-GREEN

*the pots
disintegrate
BUT...
your profits
multiply*



Ideal for Annuals, Vegetables, Specialties

These Bird Vita-Green Pots have been dug up after transplanting to show how the pots disintegrate, allowing complete root penetration. But while the pots fade away, the plants grow stronger and healthier — and so do your profits. Here's how:

Bird Vita-Green Pots enable you to space out your prime plants easily to allow room for heavier top growth. They are ideal for annuals and vegetables, and for all specialties grown by florists, nurserymen and market gardeners. Because the whole pot is planted, there's no transplant shock —

plants are more luxurious. Your own transplanting is simplified — no root ball to remove, no empty pots to cart away. And for re-sale, Bird Vita-Green Pots are beautifully shaped, finished in an attractive green color.

Roots are contained from 12 to 14 weeks. Pot disintegrates after transplanting. The "Vita" nutrient feeds plant as the pot disintegrates.

Look at the low prices! You can easily afford to expand your whole line of potted plants. Order from your distributor or send coupon for complete information.

GET THE WHOLE FLOCK OF BIRDS

VITA-BANDS:

Variety of sizes and types. Eliminate transplant shock.

PERENNIAL POTS:

Economical for potting mums, perennials, bulbs, shrubs, roses.

VITA-M POTS:

Inexpensive molded pulp pot for long-term growing. Easily stored.

GRO-TAINER:

Molded flat for merchandising twelve plants.



PRICES

Size	2 1/4"	2 1/2"	3"	3 1/2"	4"
List Price per Thousand	\$7.10	\$8.60	\$12.40	\$14.30	\$16.75
Quantity Packed Per Case	2000	2000	2000	1000	1000
Gross Weight (Lbs.) Per Case	17	22	31	20	31

See your distributor for delivered prices



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New Sturdy Euonymus Shrubs

The IDEAL BROAD-LEAVED
EVERGREEN

for Modern Landscape Design



EMERALD CUSHION (Pictured).
(Pat. 1112.) Low, dwarf shrub.
Height 18 ins.

EMERALD PRIDE (Pat. 1073). Compact, bush type.

EMERALD CHARM (Pat. 1079). Narrow, columnar shape.

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Requires no staking . . . little shearing or shaping . . . compact forms . . . high disease resistance . . . drought endurance . . . low temperature adaptability . . . resistant to dog damage. They make wonderful hedge plants, foundation and ornamental shrubs.

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Hawthorne, N. Y.

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pus. The Colorado Nurserymen's Association, under the direction of President Stanley Brown, Alameda Nursery, Denver, Colo., will assist faculty members in preparing the program.

RHODE ISLAND DATE

February 20 has been chosen by the Rhode Island Nurserymen's Association as the date for its winter meeting, according to Anthony Williams, secretary of the organization. The meeting will be held at Johnson's Hummocks grill, Providence, R. I.

MASSACHUSETTS THEME

The subject of "Selling," in all its aspects, will be the theme of the short course of the Massachusetts Nurserymen's Association this year, according to Helen S. Anderson, executive secretary of the group. Employees and employers alike will find the program valuable, it is declared. The sessions are scheduled for February 29 and March 1 at the Waltham field station, Waltham, Mass.

OREGON SHORT COURSE

The first combined short course for those interested in the production and use of nursery and ornamental crops will be held on the Oregon State College campus, Corvallis, Ore., February 5 and 6. The purpose as outlined by the college staff committee is to disseminate information pertaining to the production and utilization of specialty horticultural crops. This information will cover production and management problems, insect and disease control problems and landscape planning, construction and maintenance. A registration fee of \$2 will be charged to defray the expense of printing the program and bringing in out-of-state speakers.

General sessions of interest to all groups concerned will be held each morning from 9 a.m. to 12 noon and will include such topics as: 1. "Looking Ahead with the Horticultural Specialties Industry" (a panel). 2. "Future Opportunities in the Field of Ornamental Horticulture." 3. "Designing for the Environment." 4. "What's New in Agricultural Chemicals." 5. "Survival and Spread of Plant Pests."

In addition, sessions for special groups are being arranged by the following: Roy Young, nurserymen; Don Martel, landscape gardeners; Larry Blaney, bulb growers; Stan

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ACER

(Japanese Red Maple)

	Per 100
<i>palmatum</i> Oshiu Beni, brilliant red	
1-yr., grafts, 8 to 10 ins.	\$ 75.00
1-yr., grafts, 10 to 12 ins.	85.00
1-yr., grafts, 12 to 15 ins.	100.00
2-yr., grafts, 12 to 15 ins.	150.00
2-yr., grafts, 15 to 18 ins.	175.00
<i>palmatum</i> Bloodgood, darkest red	
1-yr., grafts, 8 to 10 ins.	100.00
1-yr., grafts, 10 to 12 ins.	125.00

CORNUS

florida rubra (Pink-Flowering Dogwood)

1-yr., grafts, 15 to 18 ins.	75.00
1-yr., grafts, 18 to 24 ins.	100.00

ILEX

opaca—our own introduction, selected for its fruiting qualities.
1-yr., cuttings, 8 to 10 ins. . . 40.00
1-yr., cuttings, 10 to 15 ins. . . 60.00
1-yr., cuttings, 12 to 15 ins. . . 75.00
No packing charge on liners.

FINISHED STOCK

AZALEA PONTICA (Hardy Ghent)
daviesi, white, very fragrant
Gloria Mundi, pure orange
Unique, orange-yellow
15 to 18 ins. B&B 275.00
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horizontalis depressa plumosa
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burkwoodi, fragrant
18 to 24 ins. B&B 125.00
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No boxing; B&B stock.

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PINK DOGWOOD

(*Cornus florida rubra*)

America's Favorite Flowering Tree

ONE-YEAR

	Each per 10	Each per 100	Each per 1000
12 to 18 ins., bare-root	\$1.00	\$0.75	\$0.65
18 to 24 ins., bare-root	1.25	1.00	.90
24 to 30 ins., bare-root	1.50	1.25	1.15
30 to 36 ins., bare-root	1.75	1.50	1.25

TWO-YEAR

	Each per 10	Each per 100	Each per 1000
2 to 3 ft., bare-root	\$2.00	\$1.75	\$1.50
3 to 4 ft., bare-root	2.50	2.00	1.75
4 to 5 ft., bare-root	3.50	3.00	2.75
5 to 6 ft., bare-root	4.50	4.00	3.75

BALLED AND BURLAPPED

	Each per 10	Each per 100	Each per 1000
2 to 3 ft., B&B	\$2.50	\$2.00	\$1.75
3 to 4 ft., B&B	3.00	2.50	2.25
4 to 5 ft., B&B	4.00	3.50	3.25
5 to 6 ft., B&B	5.00	4.50	4.25

- Budded on Transplanted Seedlings
- Heavy, Fibrous Root System
- Sturdy Caliper

- Heavily Branched
- Properly Grown
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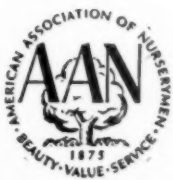
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BENCH ROOT GRAFTS FOR 1957

All shipments will be made between March 15 and April 1, unless otherwise requested or specified or unless, due to inclement weather, period is extended. Order in units of 25 or more of a variety.

MALUS—Flowering Crab Apple

The following varieties \$12.00 per 100.

Almey, pink, large flowers
Atrosanguinea, carmine
Bechtel, pink, double
Eleyi, purple-red
Floribunda, pink and white
Gloriosa, red

Hopa, purple-red
Parkman, pink, double
Prince George, pink
Red Field, red
Red Silver, red
Spectabilis, pink

Theifera, pink and white

FLOWERING QUINCE

\$15.00 per 100; \$125.00 per 1000.

Charming, shell-pink
Coral Beauty, coral

Snow, white
Stanford Red, red

SYRINGA—French Hybrid Lilac

\$15.00 per 100; \$125.00 per 1000

Alice Eastwood, blue
Charles X, claret-red
Ellen Willmott, white
Ludwig Spaeth, purple
Paul Hariot, purple
Paul Thirion, claret-red
President Grey, blue

President Viger, blue
Macrostachya, pink
Mme. A. Buchner, pink
Mme. Chas. Souchet, blue (new, 1949)
Mme. Lemoine, white

JAPANESE FLOWERING CHERRIES

\$20.00 per 100; \$175.00 per 1000.

Kwanzan, double pink

Weeping Pink

Cash with order. No packing charges.

RUMMEL NURSERIES

POMPTON PLAINS 1, N. J.

QUALITY LINERS

In Wide Assortment
NURSERY SALES, INC.

525 Stevens Ave., P. O. Box 295
RIDGEWOOD, N. J.
Gl. 4-6848

SHEPARD NURSERIES

Growers and Distributors of

ORNAMENTAL NURSERY STOCK

Truckloads only, no boxing.

60 acres growing. Skaneateles, N. Y.

GROWERS

EVERGREEN TREE LINING-OUT STOCK

Write for free price list.

SUNCREST EVERGREEN NURSERIES

P. O. Box 305-F HOMER CITY, PA.

VUYK VAN NES

Vuykiana Azaleas, Hardy Forcing Hybrids

Ghent & Mollis Azaleas, Hybrid Rhododendrons

Clematis, Peonies, Astilbe, Dicentra

Red Maple, Copper Beech, Fancy Shrubs.

140 Cedar Street, New York 6, N. Y.

QUALITY STOCK GROWN BY US

Roses, Azaleas, Evergreens, California Privet, Green Barberry, Red Barberry (fine strain).

Seedlings and transplants.

DANEGGER'S HI-WAY NURSERY, INC.

P. O. Box 336 MILFORD, DEL.

GOLDEN VICARY PRIVET

Lovely, solid, golden-leaved variety. Extremely adaptable for a striking border. Retains full golden color from spring to fall. Beautiful for rose bed borders. Should have full sun.

Potted liners \$18.00 Per 100 Per 1000
Outdoor frame rooted cuttings... 10.00 80.00

BEARDSLEE NURSERY

Perry, O.

A General Line of
FRUIT and ORNAMENTAL
TREES and PLANTS

BUNTINGS' NURSERIES, Inc.
BOX 3 SELBYVILLE, DEL.

For Quality Stock RICKERT NURSERIES

Successor to Moon's

Established 1767

MORRISVILLE, PA.

LINING-OUT STOCK

AZALEAS—hardy American and Asiatic.

TAXUS—the better varieties.

BROOKFIELD GARDENS

Rt. 46 DELAWARE, N. J.

DEL-MAR-VA NURSERIES

Growers of Quality

Taxus, Ilex and other Ornamentals.

Ask for list.

DEL-MAR-VA NURSERIES
LINCOLN, DEL.

Phone: Milford, Delaware 4445

Wadsworth, flower growers, and Knud Swenson, holly growers.

These session topics are as follows:

NURSERYMEN,

LANDSCAPE GARDENERS

AND FLOWER GROWERS

"Methods of Sterilizing Soil in Greenhouses and Nurseries."

"Nutrition of Rhododendrons and Azaleas."

"Diseases of Rhododendrons and Azaleas."

"New Developments in Plastics."

NURSERYMEN AND

LANDSCAPE GARDENERS

"The Visual Effect of Plant Structure."

"Container-Growing of Nursery Stock."

"Dormancy in Woody Plants."

"Evaluation of Winter Injury" (a panel).

BULB GROWERS

"Viruses in Lilies."

"Bulb Pest Problems."

"Report on Nutrition Survey of Croft Lilies."

"Current Status of 'Summer-Sprout' Problem."

BULB AND FLOWER GROWERS

"Problems of Greenhouse Forcing of Oregon-Grown Lilies."

"Use of Soil Testing Kits."

"Inspection of Current Greenhouse Research."

HOLLY GROWERS

"Holly Orchard Soil Management Problems."

"Insect Pests of Holly."

"Diseases of Holly."

"Grades and Grading."

Besides the college staff, there will be several speakers from out of state, including: Dr. V. T. Stoutemyer, chairman of the department of floriculture and ornamental horticulture, University of California at Los Angeles; Walter L. Doty, head of the division of editorial research, Sunset magazine, who will speak on "Designing for the Environment." 4. George K. Ball, president of George J. Ball, Inc., West Chicago, Ill., whose topic will be "Problems of Greenhouse Forcing of Oregon-Grown Lilies," and Dr. Charles F. Doucette, entomologist, United States Department of Agriculture, ornamentals insect research laboratory, Sumner, Wash., who is scheduled to deliver the talk on "Bulb Pest Problems."

ACCIDENT PREVENTION PROGRAM

[Continued from page 14]

All nurseries receive a monthly calendar, vividly colored and carrying a safety message, from an insurance company.

Accidents Classified

At each annual meeting of the association, all members receive an analysis of accidents, prepared by an insurance company. This analysis

QUALITY GUARANTEED TO PLEASE



3-yr. block, Dogwood, once root-pruned.



3-Yr. block, Ilex rotundifolia.

ILEX ROTUNDIFOLIA

15 to 18 ins., B&B	Each \$1.50
18 to 24 ins., B&B	2.00

PFITZER JUNIPER

15 to 18 ins., B&B	1.50
18 to 24 ins., B&B	2.00
24 to 30 ins., B&B	2.50
30 to 36 ins., B&B	3.00

HETZ JUNIPER

15 to 18 ins., B&B	1.50
18 to 24 ins., B&B	2.00
24 to 30 ins., B&B	2.50
30 to 36 ins., B&B	3.00

GREEK JUNIPER

15 to 18 ins., B&B	1.50
18 to 24 ins., B&B	1.75

GLOBE ARBORVITAE

15 to 18 ins., B&B	1.75
--------------------	------

PYRAMIDAL ARBORVITAE

2 to 3 ft., B&B	2.00
3 to 4 ft., B&B	2.25

ABELIA GRANDIFLORA

18 to 24 ins., B.R.	.50
2 to 3 ft., B.R.	.75
3 to 4 ft., B.R.	1.00
B&B add 25c each.	

BARBERRY, SARGENT

15 to 18 ins., B&B	1.50
18 to 24 ins., B&B	2.00
24 to 30 ins., B&B	2.25

BOXWOOD, SEMPERVIRENS

12 ins., B&B	1.50
15 ins., B&B	2.00
18 ins., B&B	2.50
20 ins., B&B	3.50

COTONEASTER DIVARICATA

2 to 3 ft., B&B	1.50
-----------------	------

ELAEAGNUS PUNGENS**FRUITLANDI**

24 to 30 ins., B&B	1.50
30 to 36 ins., B&B	1.75

ELAEAGNUS PUNGENS**REFLEXA**

24 to 30 ins., B&B	1.50
30 to 36 ins., B&B	1.75

EUONYMUS CARRIERI

15 to 18 ins., B&B	1.25
18 to 24 ins., B&B	1.50

EUONYMUS PATENS

15 to 18 ins., B&B	Each \$1.25
18 to 24 ins., B&B	1.50
24 to 30 ins., B&B	1.75

**EUONYMUS RADICANS
ERECTUS**

15 to 18 ins., B&B	1.25
18 to 24 ins., B&B	1.50

ILEX VOMITORIA

2 to 3 ft., B&B	2.50
3 to 4 ft., B&B	3.50

JASMINE, FLORIDUM

2 to 3 ft., B.R.	1.00
B&B add 25c each.	

CHERRY LAUREL

2 to 3 ft., B&B	1.75
3 to 4 ft., B&B	2.25
4 to 5 ft., B&B	3.00
5 to 6 ft., B&B	3.75

ENGLISH LAUREL

24 to 30 ins., B&B	1.75
30 to 36 ins., B&B	2.00

NANDINA DOMESTICA

18 to 24 ins., B&B	1.25
24 to 30 ins., B&B	1.50
30 to 36 ins., B&B	1.75

MAGNOLIA GRANDIFLORA

2 to 3 ft., B&B	2.50
3 to 4 ft., B&B	3.50

VIBURNUM, LEATHER-LEAVED

18 to 24 ins., B&B	1.75
24 to 30 ins., B&B	2.25

DOUBLE-FLOWERING PEACH

Red, White and Pink	
2 to 3 ft., B.R.	.30
3 to 4 ft., B.R.	.40

RHUS COTINUS

(Smoke Tree)	
4 to 5 ft., B.R.	.75
5 to 6 ft., B.R.	1.00

TREE WISTARIA

3 to 4 ft., B&B	3.50
4 to 5 ft., B&B	4.50

MIMOSA

4 to 5 ft., B.R.	.85
5 to 6 ft., B.R.	1.10

RED-LEAVED BARBERRY

15 to 18 ins., B.R.	Each \$0.25
18 to 24 ins., B.R.	.35

PINK-FLOWERING DOGWOOD

with bloom buds	
3 to 4 ft., B.R.	2.50
4 to 5 ft., B.R.	3.50
5 to 6 ft., B.R.	4.50
B&B add 50c each.	

PINK-FLOWERING DOGWOOD

18 to 24 ins., B.R.	1.00
24 to 30 ins., B.R.	1.25
30 to 36 ins., B.R.	1.50
3 to 4 ft., B.R.	2.00

**WHITE-FLOWERING
DOGWOOD**

3 to 4 ft., B.R.	1.00
4 to 5 ft., B.R.	2.00
5 to 6 ft., B.R.	2.50
6 to 8 ft., B.R.	4.50
B&B add 50c more.	

OAK-LEAVED HYDRANGEA

24 to 30 ins., B.R.	.40
30 to 36 ins., B.R.	.50

MAGNOLIA SOULANGEANA

2 to 3 ft., B&B	2.50
3 to 4 ft., B&B	3.00

VIBURNUM LANTANA

2 to 3 ft., B.R.	.30
3 to 4 ft., B.R.	.40

PEACH, 1-YR., DORMANT

3 to 4 ft.	.25
7/16-in. cal.	.35
9/16-in. cal.	.40
1 1/16-in. cal., Elberta only	.45

Ambergem

Belle of Georgia

Champion

Dixiegem

Elberta

Golden Jubilee

Halehaven

J. H. Hale

Sullivan Early Elberta

Redhaven

Red Skin

Keystone

Triogem

HAWKERSMITH & SONS NURSERY

TULLAHOMA, TENN.

Phone: GL-5-4552

SEEDLINGS FOR SPRING

	Per 100	Per 1000
Scotch Pine		
2-yr., S., 2 to 4 ins. ...	\$ 2.50	\$12.50
2-yr., S., 3 to 6 ins. ...	4.00	20.00
2-yr., S., 4 to 8 ins. ...	5.00	25.00
Riga Scotch Pine		
2-yr., S., 2 to 4 ins. ...	3.00	15.00
2-yr., S., 4 to 8 ins. ...	5.00	25.00
Scotch Pine		
2-1, T., 3 to 6 ins. ...	7.00	35.00
Austrian Pine		
2-yr., S., 2 to 3 ins. ...	2.50	12.50
2-yr., S., 3 to 6 ins. ...	4.00	20.00
2-2, T., 5 to 10 ins. ...	10.00	50.00
2-2, T., 8 to 16 ins. ...	20.00	...
American Red Pine		
2-yr., S., 2 to 4 ins. ...	3.00	15.00
3-yr., S., 4 to 6 ins. ...	5.00	25.00
3-yr., S., 6 to 10 ins. ...	7.00	35.00
2-2, T., 4 to 8 ins. ...	10.00	50.00
2-2, T., 8 to 12 ins. ...	15.00	...
Ponderosa Pine		
2-yr., S., 2 to 4 ins. ...	3.00	15.00
2-yr., S., 4 to 7 ins. ...	5.00	25.00
Mugho Pine		
2-yr., S., 2 to 4 ins. ...	4.00	20.00
3-yr., S., 3 to 6 ins. ...	6.00	30.00
White Pine		
2-yr., S., 3 to 6 ins. ...	4.00	20.00
2-2, T., 4 to 8 ins. ...	10.00	50.00
Douglas Fir		
3-yr., S., 2 to 4 ins. ...	4.00	20.00
3-yr., S., 4 to 8 ins. ...	7.00	35.00
Colorado Spruce		
2-yr., S., 2 to 4 ins. ...	3.00	15.00
2-yr., S., 3 to 7 ins. ...	5.00	25.00
3-yr., S., 3 to 5 ins. ...	6.00	30.00
3-yr., S., 5 to 9 ins. ...	9.00	45.00
3-yr., S., 8 to 12 ins. ...	15.00	...
2-2, T., 3 to 6 ins. ...	9.00	45.00
2-2, T., 6 to 10 ins. ...	12.00	60.00
2-2, T., 8 to 12 ins. ...	30.00	...
Norway Spruce		
2-yr., S., 2 to 4 ins. ...	3.00	15.00
2-yr., S., 4 to 8 ins. ...	5.00	25.00
3-yr., S., 6 to 10 ins. ...	7.00	35.00
3-yr., S., 8 to 14 ins. ...	9.00	45.00
2-2, T., 5 to 8 ins. ...	10.00	50.00
2-2, T., 8 to 12 ins. ...	15.00	75.00
2-2, T., 10 to 15 ins. ...	25.00	...
White Spruce		
2-yr., S., 2 to 4 ins. ...	3.00	15.00
2-yr., S., 3 to 7 ins. ...	4.50	22.50
3-yr., S., 4 to 8 ins. ...	6.00	30.00
3-yr., S., 6 to 10 ins. ...	7.00	35.00
3-yr., S., 8 to 12 ins. ...	8.00	40.00
2-2, T., 5 to 8 ins. ...	10.00	50.00
2-2, T., 8 to 12 ins. ...	15.00	75.00
2-2, T., 10 to 15 ins. ...	25.00	...
Black Hills White Spruce		
2-yr., S., 2 to 4 ins. ...	3.00	15.00
3-yr., S., 3 to 6 ins. ...	5.00	25.00
2-yr., S., 5 to 8 ins. ...	7.00	35.00
2-2, T., 3 to 5 ins. ...	2.00	35.00
2-2, T., 5 to 8 ins. ...	10.00	50.00
Canadian Hemlock		
2-yr., S., 3 to 6 ins. ...	6.00	30.00
3-1, T., 5 to 10 ins. ...	15.00	75.00

Add 3% sales tax for Pennsylvania destinations or supply exemption complete with license number.

Cash or 25% deposit with order, balance C.O.D. 5% discount on quantities of 25,000.

NOW plant trees the modern way with a **ROOTSPRED TREE PLANTER**

Here is a husky, fast (over 100 per hour) tree seedling planter for reforestation, Christmas tree and ornamental planting.

Made for Ford or Ferguson 3-point hitch.

For picture and information write:

SAM DIBLE NURSERY
R. F. D. 3 SHELOCTA, PA.

shows the types of accidents and the percentage of the total number of accidents represented by each classification. The 1955-56 report is published here and suggests that the hazards to which nurserymen are exposed are many.

Cause	No. of accidents	Per cent of total
Strain or sprain.....	119	29
• Lifting or lowering..	81	
• Pushing or Pulling	21	
Slips	13	
Others	4	
Struck against	96	24
Stationary objects.....	29	
Stepping on sharp objects	3	
Containers	30	
Thorns and Splinters	30	
Nails	4	
Struck by	83	21
Falling objects	23	
Flying objects	17	
Caught in, on or between	15	
Hand tools	28	
Falls	25	6
On the same level..	15	
Ladders, stairs	5	
Elevations	2	
Holes, ditches	3	
Farm Machinery	14	3
Tractors	9	
Field machinery.....	5	
Natural Elements	13	3
Poisonous plants....	3	
Pests	8	
Sun heat	2	
Dermatitis	13	3
F. B. Eye	13	3
Motor Vehicles	10	2
Collision	3	
Fall from	5	
Cranking	1	
Run over or struck by	1	
Stationary machinery....	8	2
Burns	2	1
Chemical	3	1
Miscellaneous	5	2
	404	100

Part of Body Injured	Number	Percentage
Trunk	136	34
Fingers	82	20
Hands	45	11
Eyes	37	9
Head	29	7
Legs	24	6
Arms	23	6
Feet	17	4
Toes	11	3
Total	404	100

1 death — unit 348.
Man was crushed by overturned tractor

Strains have been the leading cause of trouble in all the annual reports. To improve this situation, the educational programs within the chapters are now stressing the proper methods of lifting.

During 1955, on-the-job accidents took the lives of 14,200 Americans and injured nearly 2,000,000. President Dwight Eisenhower, in setting May 13 to 19, 1956, as job safety week, declared: "This is a work in which all must share. An injury anywhere is a loss to the nation as a whole. Safety must become a daily habit in all our work places if we are to reach our full potential of strength."

It is evident that there is plenty of work yet to be done to promote safety in all occupations, not only to help financially but to reduce human suffering.

BLASER NURSERY, near Sarasota, Fla., will sell retail, the first time in its 25-year history.

READY FOR SHIPMENT NOW

Red-leaved Barberry	Per 100	Per 1000
2-yr., S., 9 to 12 ins. ...	\$ 6.50	\$ 65.00
2-yr., S., 12 to 18 ins. ...	12.50	125.00
Green-leaved Barberry		
2-yr., S., 4 to 9 ins. ...	4.50	30.00
2-yr., S., 9 to 15 ins. ...	6.50	50.00
Cornus florida		
1-yr., S., small	3.50	22.50
1-yr., S., planting size. (grafting size sold out)	5.00	35.00
Cydonia japonica		
1-yr., S., 6 to 10 ins. ...	4.50	30.00
1-yr., S., 10 to 15 ins. ...	7.50	60.00
2-yr., S., 15 to 21 ins. ...	15.00	125.00
Forsythia Spring Glory		
1-yr., hardwood cutting	7.50	60.00
1-yr., 18 to 24 ins. ...	15.00	125.00
Kuonimys alatus compactus		
1-yr., R. C., T.	17.50	165.00
Taxus cuspidata, spreading		
2-yr., T.	25.00	225.00

Red-leaved Barberry, 1-yr., S., only sold with special permit.
Per 1000, \$50.00
Per 10,000, \$400.00

BROUWER'S NURSERIES
Box 25, NEW LONDON, CONN.

ORNAMENTAL EVERGREENS

Trees and Shrubs

BAGATELLE NURSERY
P. O. Huntington Station, N. Y.

Japanese Boxwood

Apple-green leaves; does well in sun or shade. Will tolerate dense shade. Very rapid growing, good for foundation planting.

6 to 8 ins., 2-yr., T., \$10.00 per 100.

Send for List of Unusual Plants

ALANWOLD NURSERY
NESHAMINY, Bucks Co., PA.

EVERGREEN SEEDLINGS

Growers of Quality Evergreen Seedlings and Transplants.
Free price list and planting guide.
Visitors Welcome

FLICKINGER'S NURSERY
Box 92 SAGAMORE, PA.

We never talk about the other fellow's low prices; he knows what his merchandise is worth. We grow good evergreen liners. Ask for our wholesale list.

The STEDMAN NURSERIES
NEWFANE, N. Y.

SPLIT ROCK NURSERIES

Propagators and Growers

218 Farview Ave.
PARAMUS, N. J.

Phone COLfax 2-5873

Hitch on to more profits with a **YORK RAKE**

One man operating a York Rake can do more in a few hours than a crew of men using old-fashioned hand methods can accomplish in a whole day! The York Rake is practically the only tool you need to do every job from rough grading to final raking. It's sturdy, it's efficient, it's easy to operate, and it soon pays for itself in time and labor savings. Model RE for tractors with 3-point hitch. Other models for lighter tractors.



The YORK RAKE does all these landscaping jobs better... faster... easier — eliminates costly hand labor!



Rakes stones, roots and debris



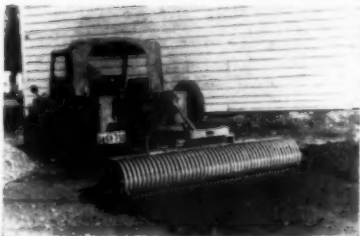
Grades, levels and mulches soil



Spreads topsoil rapidly, evenly



Reverses for bulldozing



**Grader blade attachment
for ditching and terracing**



Spreads stone and gravel



Write for descriptive folder and prices

Get the complete story on this versatile, labor-saving tool. This illustrated folder describes the many uses for the York Rake that make it a profit-producer on every landscaping and lawn-building job.

Write to Dept. AN-1

York
MODERN CORPORATION
UNADILLA, NEW YORK

GUARANTEED - TO - LIVE TRANSPLANTED EVERGREENS



American Arborvitae, 4-yr. transplants (2-2), 4 to 10 in.	Per 1000 \$ 70.00
Douglas Fir, 3-yr. transplants (2-1), 3 to 5 in.	65.00
Austrian Pine, 4-yr. transplants (2-2), 5 to 10 in.	70.00
Mugho Pine, 4-yr. transplants (2-2), 3 to 5 in.	70.00
Red Pine, 4-yr. transplants (2-2), 5 to 10 in.	65.00
Scotch Pine, 3-yr. transplants (2-1), 3 to 5 in.	65.00
White Pine, 4-yr. transplants (2-2), 5 to 10 in.	65.00
Colorado Blue Spruce, 5-yr. transplants (3-2), 5 to 8 in.	115.00
Norway Spruce, 4-yr. transplants (2-2), 4 to 8 in.	70.00

SEEDLINGS

(not guaranteed)

American Arborvitae, 3-yr. seedlings (3-0), 3 to 5 in.	20.00
Black Hill Spruce, 3-yr. seedlings (3-0), 3 to 5 in.	20.00
Engelmann Blue Spruce, 3-yr. seedlings (3-0), 3 to 5 in.	20.00
Scotch Pine (North German), 2-yr. seedlings (2-0), 4 to 8 in.	20.00
Scotch Pine (Riga), 2-yr. seedlings (2-0), 2 to 6 in.	18.00

TERMS

Cash with order; or one-half cash with order, balance C.O.D. All prices F.O.B. Fryeburg, Maine, net; no discounts. 250 trees of any one kind and size at the 1000 rate. For less than 250 of one kind, ask for retail price list. No extra charge for boxes or packing.

OUR GUARANTEE

30 per cent of all transplants sold at regular wholesale prices as quoted in this list are guaranteed to live. Replacements will be made free of charge for any losses in excess of 10 per cent of the number purchased, provided we are notified of such losses by October 1, 1957. (Seedlings not guaranteed.)

We believe that we grow and ship more transplanted evergreen trees than any other privately owned nursery in the country. Several other varieties of transplants available. Send for complete list of stock.

WESTERN MAINE FOREST NURSERY CO., Dept. AN-137
Fryeburg, Maine

MULTIFLORA ROSE

(Rosa multiflora japonica)

Upright, thorny-type, hardy, northern-grown stock, for conservation, living fences and budding understock. Our soil makes the finest fibrous roots. Our high quality is well known.

	Per 1000
1 to 3 mm. in caliper, 8 to 10 ins. in height.....	\$10.00
3 to 8 mm. in caliper, 10 to 24 ins. in height for conservation	22.50
4 to 6 mm. in caliper, 15 to 20 ins. in height for understock.....	25.00
6 to 8 mm. in caliper, 18 to 30 ins. in height.....	35.00

Free Packing

Less than 1000 add 30%.

BROOKVILLE NURSERIES

Box 53, Northern Blvd.

GLEN HEAD, N. Y.

Just arrived from Europe


NEW HYBRID CLIVIA

4 year old, heavy foliage, bare rooted, two feet plants. Prepared to bloom Jan.-

Feb. Clusters of Orange Red flowers.
3 for \$6.50 10 for \$19.00

F. O. B. Roslyn Heights, N. Y.

STASSEN FLORAL GARDENS, Inc.
DEPT. 31 ROSLYN HEIGHTS, N. Y.

HEMLOCK

Rhododendron—Kalmia

Azalea

CURTIS NURSERIES

CALLICOON, N. Y.

JAPANESE BARBERRY

Per 100 Per 1000

GREEN

2-yr., S., 9 to 12 ins. ..	7.50	\$ 60.00
Heavy, T., 15 to 18 ins.	20.00	175.00
Heavy, T., 18 to 24 ins.	25.00	225.00
Heavy, T., 2 to 2½ ft.	30.00	.....

RED

2-yr., S., 6 to 9 ins.	5.50	45.00
2-yr., S., 12 to 18 ins.	9.50	85.00
3-yr., T., lightweight, 12 to 18 ins.	17.50	150.00
3-yr., T., lightweight, 18 to 24 ins.	22.50	200.00
Heavy, T., 12 to 15 ins.	22.50	200.00
Heavy, T., 15 to 18 ins.	27.50	250.00
Heavy, T., 18 to 24 ins.	33.00	300.00
Heavy, T., 2 to 2½ ft.	37.50	350.00

5% cash discount. Packing additional at cost. Can make immediate shipment.

FAIRVIEW EVERGREEN NURSERIES

FAIRVIEW, Erie Co., PA.

**NOW IS THE TIME TO PLANT
AMERICAN**


Please mention the **American Nurseryman** when writing advertisers

OBITUARY

Robert W. Kuss

Robert W. Kuss, of Kuss Bros., Dorneyville, Pa., and president of Lehigh Valley Nurseries, Inc., Bethlehem, Pa., died at his Allentown home after five weeks' illness December 1, 1956.

Mr. Kuss had started the Kuss Bros. nursery on a lot adjoining his home at Dorneyville, in 1927; 10 years later he moved it to its present location. He had also operated several Christmas tree lots in season. Born at Allentown, he had attended local schools and, later, Cornell University, Ithaca, N. Y.

Surviving are the widow, three daughters, a brother and a sister.

Harry Glenn Arnett

Harry Glenn Arnett, 55, a partner in Trees of Houston, Houston, Tex., died of a heart attack December 10. Mr. Arnett, who moved to the Texas city in 1928 from Wheeling, W. Va., was associated for 26 years with the Blume System Tree Experts at Houston before going into partnership with J. Gerald Corr, J. O. Ivy, O. J. Anderson and C. L. Bengel to form Trees of Houston.

He is survived by his widow and a 13-year-old son.

Jesse L. Strauss

Jesse L. Strauss, 76, died December 24 at his home at Glencoe, Ill. Although he was not a professional grower, he was known to many nurserymen and commercial growers as chief horticulturist of the Men's Garden Clubs of America, a position he held for many years. An early promoter of the American Horticultural Council, he served two terms as vice-president of that organization.

BEILMANN LOSES POST

August P. Beilmann, manager for 28 years of the arboretum of the Missouri Botanical Garden, Gray Summit, Mo., and a nationally known horticulturist, was relieved of his duties at the garden January 1, according to a report in a local newspaper. Economy was given as the reason for his dismissal.

It was learned that a report prepared by A. T. Kearney & Co., Chicago, Ill., business consultants, was critical of the garden's administration by its trustees and directors, the article states. John S. Lehmann, attorney and president of the board of

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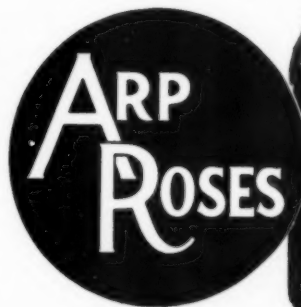
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TREES

The finest quality. Good full tops.
Straight trunks.

NORWAY MAPLE, 9 to 11 ft., 1 1/4 to 1 1/2-in. cal.; 10 to 12 ft., 1 1/2 to 1 3/4-in. cal.; 11 to 13 ft., 1 3/4 to 2-in. cal.

PIN OAK, 10 to 12 ft., 1 1/2 to 1 3/4-in. cal.; 10 to 12 ft., 1 3/4 to 2-in. cal.; 11 to 13 ft., 2 to 2 1/2-in. cal.

Many other excellent shade tree varieties.

WEeping JAPANESE CHERRY

Grafted trees, grown on their own stems. Absolutely hardy, pink flowers, very graceful. Makes an excellent specimen tree. Ideal to pot for this spring's salesyard operations. 3 to 4 ft., 4 to 5 ft. and 5 to 6 ft. Will bloom this spring.

DOWNY HAWTHORN, tree-form. Foliage is large and has vivid fall coloring. Spectacular large, bright red fruits. One of the finest small trees. Ultimate height 25 ft. 4 to 5 ft., 5 to 6 ft. and 6 to 7 ft. standards.

WASHINGTON HAWTHORN, multiple-stem trees. Makes an excellent thorny hedge or screen. Abundant red fruits last till spring. Has very colorful foliage in fall. Ultimate height 12 to 15 ft.

EUONYMUS ALATUS, corky bark. Compact-grown. The ideal low-maintenance hedge plant. Bright crimson autumn coloring, 18 to 24 ins. and 2 to 3 ft.

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Scotch Pine Seedlings, 2 years
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QUALITY LINERS

	Per 100
Viburnum carlesii 4 to 8 ins., S.	\$20.00
American Holly 6 to 12 ins., T.	27.50
French Hybrid Lilacs , best varieties, 12 to 18 ins., grafts	37.50
Pink-flowering Dogwood 10 to 15 ins., grafts	75.00
15 to 24 ins., grafts	85.00

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Our spring, 1957, price list of quality
liners now available. If interested,
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LILACS ON OWN ROOTS

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GENESEO, N. Y.

trustees, in notifying Mr. Beilmann of his discharge, refused to say whether the report criticized the manager or his staff.

The confidential report and Mr. Beilmann's dismissal were the latest developments in a series of controversies among the garden's devotees and its staff regarding its library, sale of fungi from the herbarium, discharge of key employees of long service and the sale of six acres of the garden's property in St. Louis to the National Council of State Garden Clubs. Mr. Beilmann and others opposed the sale, which had been authorized earlier by a court decree.

NORTH JERSEY MEETING

At the regular meeting of the North Jersey Metropolitan Nurserymen's Association held December 13 at the Peacock House, Mountain View, N. J., members were entertained with pictures taken by Vice-president Charles Hess, Jr., Hess' Nurseries, Mountain View, on his recent trip to Holland, and those taken by William H. Hallicy, Clifton, association president, when he visited the western states.

After the showing of the pictures, a supper was served, and the rest of the evening was spent in good fellowship.

Edward S. Wyckoff, Sec'y.

PASADENA ROSE FLOAT

For the second year, All-America Rose Selections entered a float in the 1957 tournament of roses parade on New Year's day at Pasadena, Calif. With this year's parade theme "Famous Firsts," the A. A. R. S. float featured two firsts in roses for 1957—Golden Showers and White Bouquet.

The All-America float was made up largely of rose petals, supplemented by other fresh flowers. Golden Showers was represented by a queen holding a golden parasol and standing in a shower of golden roses raining from a cloud of enormous rose blooms high overhead. Another queen was the center of a mammoth sparkling bouquet of huge white roses and held a bouquet of white roses on one arm.

Last year the A. A. R. S. float won first prize in the business association classification.

C. A. BOYER reports that in the reorganization of the state department of agriculture he is now listed as the chief of the plant industry division, Michigan department of agriculture, Lansing.

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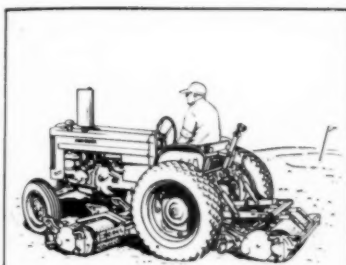
YOU want your new tractor to be modern. You want it to be easy to handle . . . stable on slopes . . . easy to keep in good running order . . . capable of handling a multitude of jobs. A John Deere Crawler or Utility (Wheel-Type) Tractor will bring you all these in full measure.

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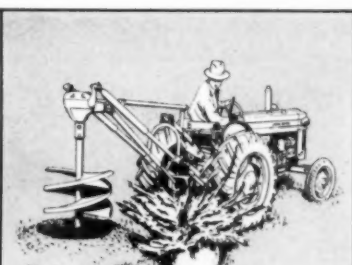
The pictures show just a few of the many integral, hydraulically controlled tools designed for these tractors.



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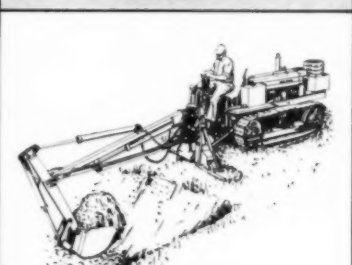
Gang Mowers



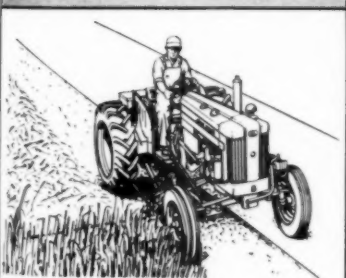
Hole Diggers



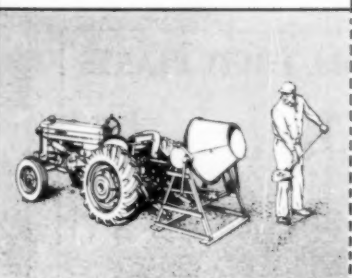
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New York Short Course

Propagation and Container Stock Panels

Reported by A. M. S. Pridham

Continuing the report of the New York nurserymen's short course at Cornell University, Ithaca, N. Y., in the previous issue, the following paragraphs include additional reports on research at the university and summaries of the panel discussions featured on the program. The earlier material covered the directors' meeting and information presented on plastic greenhouses. Reported here are the discussions on plant propagation, growing of nursery stock in containers, retail selling and landscape work. Given under a separate heading are the research data on granular herbicides and insecticides.

Plant Propagation

Nurserymen were shown present studies under Dr. John Nitsch, by Bernard Storjohann, graduate student on the commercial enterprises fellowship. The study covers the demonstration of the effect of the presence of flowers on depressing the rooting of cuttings. This work was begun years ago with *Rhododendron catawbiense* and is presently based on greenhouse chrysanthemums. Other phases of the study include the extraction of the chemicals of growth regulator type. These are separated by special methods dependent on differential diffusion of the chemicals and identification of their properties through critical bioassay procedures under controlled environmental conditions. The project is in part supported by the New York State Nurserymen's Association research grant and by other grants.

The isolation of materials depressing or stimulating cell division or cell enlargement has important implications in plant propagation and control of plant growth as indicated recently by gibberellic acid. Initial tests with gibberellic acid were shown the nurserymen in comparison to the effect of manipulating day length for prolonged vegetative growth in flowering dogwood. This last work was done by another of Dr. Nitsch's graduate students, Sidney Waxman, who is now completing his graduate work.

Cold Storage of Cuttings

The results of cold storage and rooting of cuttings under automatic watering by misting were shown for *Taxus media hicksi* and for boxwood

and pachysandra. Cuttings of these plants were stored at 32 to 35 degrees Fahrenheit for three months prior to placing in the propagating media. After rooting they were potted up in late summer in John Innis type of soil mix. The boxwood and pachysandra failed to green up in spring after wintering outdoors.

The plants responded to foliar feeding at weekly intervals. *Taxus media hicksi* cuttings were stored for five months at 32 to 35 degrees F. Cuttings stored in tight bunches in closed bags were not suitable for rooting, but those stored loosely in polyethylene appeared normal and were used. These showed varied intensities of discoloration after 90 days under automatic misting. The intensity was related to the size of

the cutting, being most frequent and most severe in small cuttings of current-year shoots. Cuttings of similar age and size rooted under open-bench manual watering were normal green color. The discoloration may be corrected by prompt fertilization.

Propagation Program

In the discussion session on plant propagation, William Flemer III offered a year-around program of propagation for group discussion. This included the following:

January—Gather and prepare (1) hardwood cuttings, (2) scionwood (lilac, hibiscus and others), (3) seedling understock. Also in January, seed treatment, especially stratification, was carried out.

February—Grafting of dormant

200,000 HARDY AZALEAS FOR SPRING DELIVERY

B&B, fine selection in the following varieties:

Rosebud	Favorite
Rose Greely	Hinodegiri
Carmen	Maxwell
Fedora	Orange Beauty
Louise	Snow
Othello	Beethoven
Salmon Beauty	Johann Strauss
Coral Bells	Ledifolia Alba

Some varieties up to 3 ft. Please write for prices.

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Spring
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**Save up to 25% on
Spring and Summer
Floral Supplies!**

Newly Imported Arti-
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... Ribbons, Foils ...
Corsage Boxes, Bags
and Pins ... Plant
Boxes ... Pot Wraps
... Styrofoam No-
velties ... Paper Boxes,
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Look at this SAMPLE VALUE!

Bluegrass Acetate Satin

Water repellent, fused edges, 200
count ... 44 colors, 6 widths (see
catalog for listings).

Width 120 Doz. Rolls
50 yd. roll... **\$1.98** \$23.76

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Send us your Spring 1957 Catalog.

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KENTUCKY**

Special Prices to the Trade**VIBURNUM BURKWOODI**

Fall or spring delivery, F.O.B. Dayton, O. Own-root. Liners established in plant bands.

Per 50	Per 100	Per 1000
\$15.00	\$25.00	\$225.00

Field-Grown Specimens

	Per 10	Per 100
18 to 24 ins., B.R.	\$10.00	\$85.00
18 to 24 ins., B&B	15.00	125.00
2 to 2½ ft., B&B	20.00	175.00
2½ to 3 ft., B&B	25.00	225.00
3 to 4 ft., B&B	37.50	335.00
4 to 5 ft., B&B	55.00	500.00

VIBURNUM CHENAULTI

More evergreen foliage and compact growing, same flowers as Burkwoodi. Own-root. Liners in plant bands.

Per 50	Per 100	Per 1000
\$17.50	\$30.00	\$250.00

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	Per 10	Per 100
2 to 2½ ft., B&B ...	\$20.00	\$175.00
2½ to 3 ft., B&B	25.00	225.00
3 to 4 ft., B&B	37.50	335.00
4 to 5 ft., B&B	55.00	500.00

VIBURNUM JUDDI

Improved Carlesi, much better foliage, same flower, compact bush. Own-root. Liners in bands.

Per 50	Per 100	Per 1000
\$17.50	\$30.00	\$250.00

Field-Grown Specimens

	Per 10	Per 100
18 to 24 ins., B&B	\$25.00	\$225.00
2 to 2½ ft., B&B	35.00	315.00
2½ to 3 ft., B&B	45.00	400.00
3 to 3½ ft., B&B ...	60.00	550.00

BERBERIS JULIANAE

Winter-Green Barberry, specimen plants.

	Per 10	Per 100
18 to 24 ins., B&B	\$25.00	\$225.00
2 to 2½ ft., B&B	35.00	300.00
2½ to 3 ft., B&B	45.00	400.00
3 to 3½ ft., B&B	60.00	500.00

BERBERIS MENTORENSIS

Mentor Barberry, bushy stock.

	Per 10	Per 100
15 to 18 ins., B.R.	\$ 5.50	\$ 50.00
18 to 24 ins., B.R.	7.00	65.00
18 to 24 ins., B&B	11.50	100.00
2 to 2½ ft., B.R.	11.50	100.00
2 to 2½ ft., B&B	16.50	150.00
2½ to 3 ft., B&B	22.50	200.00

THE SIEBENTHALER CO.

3001 Catalpa Dr. DAYTON 5, O.

plants, continued work on hardwood cuttings, callusing and planting of seeds and care of seedlings.

March—Outdoor planting of hardwood cuttings and understocks and potting up of rooted evergreens in Jiffy-Pots.

April—Removal of mulch from seed beds and sowing of spring plantings of seeds.

May—Field planting of last year's propagation of softwood cuttings.

June—Revise propagating houses, removing used sand. Clean and repair benches, bring in fresh clean sand for softwood cuttings. Go through understock cuttings and debud by rubbing down stems to remove major buds.

June—Collect and sow seeds of elm and other early flowering shrubs ripe at this time.

July—Budding of dogwood and other plants. Propagation of softwood cuttings continues.

August—Budding continues. Seedbeds are cleaned and softwood cuttings rooted in the greenhouse and transplanted to field.

September—Softwood cuttings are hardened off, and first cuttings of broad-leaved evergreens are taken. Seeds are collected at optimum stage of ripening.

October and November—Cutting wood taken for evergreen cuttings.

December—Hardwood cuttings are gathered.

Gerald Raynor, Huntington, L. I., advised beginners in propagation to use a closed polyethylene tent as a propagation structure rather than an automatic mist system, since the latter requires great care to keep it operating properly for the several kinds of material that a beginner will usually try. The rooting medium also is critical and must be of open type, or misting will waterlog it, with resulting failure of cuttings to root. Scheduling of a propagating program with modern techniques also takes study and experience so that plants may be properly rooted and hardened before moving.

Mr. Raynor suggested 4-mil polyethylene and a close frame or tent as satisfactory.

Charles Taft discussed production of perennials from seeds, stem cuttings, root cuttings and divisions. Stem cuttings were taken from August to November. Special attention was given to seeds. Begonia was started on screened and pressed sphagnum, moistened before seeds were sown. Small seeds were mixed with clean white sand to aid in thin sowing. Vermiculite was used as a seeding medium for larger seeds, after sterilization. No. 10 charcoal was



Pictured above, top row, **Andorra Juniper**; bottom row, **Pyracantha lalandi**.

See classified ad under lining-out stock for prices and other items.

MCININCH GREENHOUSES
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REMEMBER SHERMAN'S for . . .

Alpine Currant
Hydrangea P. G.
French Lilacs
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Shade Trees
Evergreens
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Plum Seedlings
Lining-out Stock

Let us quote you on your requirements.

SHERMAN NURSERY CO.
CHARLES CITY, IA.

ARMINTROUT'S EVERGREEN NURSERY
ALLEGAN, MICH.

Seedlings—Transplants
Finished Stock
Send for price list.

BETTER ORDER NOW FOR SPRING POTTING . . . SAVE WORK BY USING

easy-handling Cloverset Pots!



Being plain dirt gardeners ourselves, usually with more work than we have time to do it in, we always keep an eye open for successful short cuts. That's why we developed Cloverset Pots in the first place, designing our own because no other practical container was available. Since then we've experimented with every new material that came along—and we still find that our nursery operations are faster and easier, our cash-and-carry sales more profitable and our salesyard and frames tidier through our long selling seasons when we stick to Cloverset Pots. (And, by the way, they'll last a full year in the frames.)

So many other practical nurserymen have had the same experience with Cloverset Pots over the past 20 years that we can recommend them without reservation. If you'll get your order in soon, we'll make sure that you have the quantities and sizes you need to pot stock in time for profitable spring sales.

SIZES FOR EVERY NEED, for roses, perennials, shrubs and young trees.



Cloverset Pot Prices F.O.B. Kansas City, Mo., and Moorestown, N. J.

SIZE	HEIGHT	Top Diam.	Nearest Clay Pot	No. in Carton	WEIGHT	F.O.B. KANSAS CITY		F.O.B. MOORESTOWN, N. J.	
No. 0	5 1/4 ins.	5 ins.	6 ins.	200	Per 1000	Per 100	Per 1000	Per 100	Per 1000
No. 1	6 1/4 ins.	6 ins.	7 ins.	100	210 lbs.	\$3.75	\$35.00	\$ 4.25	\$ 40.00
No. 2	7 1/4 ins.	7 ins.	8 ins.	100	340 lbs.	4.75	45.00	5.60	53.50
No. 3	9 ins.	8 ins.	9 ins.	100	535 lbs.	5.25	50.00	6.50	62.50
					600 lbs.	5.75	55.00	7.15	69.00
No. 4	13 ins.	12 ins.	...	25	Per 100	25 pots, \$7.00; 50 pots, \$13.25;			
					133 lbs.	75 pots, \$19.75; 100, \$23.75;			
						1000, \$210.00.		26.75	240.00

(We do not break cartons)



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KANSAS CITY 14, Mo.

Eastern Distributor, Moorestown Gardens, Moorestown, Burlington Co., N. J.

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Kansas City 14, Mo.

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Send items checked; I enclose

☐ Information on Cloverset Pots.

☐ Sample set, 5 pots, 50c. (Limit one.)

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We not only grow the bushiest and most heavily budded azaleas you have ever seen, but at the same time we supply you with a free sheet of copyrighted planting instructions (we also have special planting instructions for the alkaline soil territories) which you can pass out to your customers, assuring them of success. (Incidentally, these planting instructions will sell some peat for you at the same time.) In the spring your time is doubly valuable. Why waste time giving verbal instructions (which the customer promptly forgets) when we will supply you with FREE copyrighted instructions for all azaleas purchased from us? See us at Chicago, Columbus or Grand Rapids (I'll have a sprig of our hardy holly in my lapel) and get your azaleas ordered early to be assured of getting your supply from Bosley's.

BOSLEY NURSERY
MENTOR, OHIO

used over sand-sphagnum mixtures to reduce damping off. Late summer propagation produced plants that were wintered over in pots for spring sale. Spring seedlings were placed in Markapak or other containers, but many plants were set in plant bands for individual sale.

Nursery Stock in Containers

Most New York nurserymen are familiar with tar-paper pots for roses and other shrubs to sell in bloom for immediate landscape effect. Bushel baskets, burlap and other materials are also familiar items.

Containers remain in better condition and last longer according to experience and experiment reported at the short course. Soil is a poor surface on which to place balled and burlapped stock or containers if plants are to remain there any length of time. Peat moss is better, and a gravel surface was rated best. Burlap treated with copper naphthenate, or Cuprinol, outlasts untreated burlap. One case of plant injury was reported, but most reports were favorable where Cuprinol was used on burlap or baskets. Only the part of the burlap resting on the soil need be treated. The rest of the burlap is easier to tie and to work if it is untreated. Lerio and other metal containers rust badly on peat moss and are best on pebbles. Polyethylene and plastic are ideal long-time containers. Wire baskets can be lined with polyethylene.

Leslie MacRobbie described his work with the basket-type container and brought samples of plants to the school with him. The container is neat, easily handled and impressive with a mulch of wood chips.

Test Program Told

The following report was read by Peter Colgan, fellow, Long Island horticultural foundation, on growing plants in containers.

In the spring of 1956, tests were started on the growing of plants in square, wire baskets, lined with polyethylene. The baskets were fashioned from 1x2-inch turkey wire, which came in rolls 36 inches wide and 100 feet long. The roll was cut into 92 pieces. The 13x35-inch pieces were bent into 9-inch squares with an interlocking bottom secured with hog rings. The roll of wire cost \$18, setting the cost of the wire for each basket at 20.5 cents.

The baskets were lined with 4-mil polyethylene cut from rolls 100 feet long and 12 feet wide. The roll was cut into 640 pieces 9x30 inches. Two of these pieces were used in each basket. Each piece cost 2.95 cents,

LINING-OUT STOCK

For Spring, 1957, Delivery

	Per 100	1000
One-Year Potted Stock, Cutting-Grown		
<i>Buxus koreana</i> , 2-in. pots		
6 to 8 ins.	\$22.50	\$200.00
<i>Buxus sempervirens</i> ,		
2½-in. pots, 3 to 5 ins.	22.50	200.00
<i>Cotoneaster zabell</i> , 2-in.		
pots, 6 to 8 ins.	17.50	
<i>Hedera helix</i> (Baltic Ivy),		
6 to 10 ins., vines	15.00	120.00
<i>Juniperus hetzi</i> , 2-in.		
pots, 6 to 8 ins.	20.00	180.00
<i>Juniperus pfitzeriana</i> ,		
2-in. pots, 6 to 8 ins.	20.00	175.00
<i>Taxus media</i> hicksi,		
2½-in. pots, 4 to 8 ins.	22.50	200.00
Two-Year Potted Stock, Cutting-Grown		
<i>Buxus sempervirens</i> ,		
2½-in. pots, 6 to 8 ins.,		
bushy	27.50	225.00
<i>Cotoneaster apiculata</i> ,		
2½-in. pots, 4 to 8 ins.	22.50	
<i>Juniperus hetzi</i> , 2½-in.		
pots, 6 to 8 ins.	22.50	200.00
<i>Pyracantha coccinea</i>		
<i>paniculata</i> , 2-in. pots,		
3 to 6 ins.	22.50	
<i>Pyracantha royaleana</i> ,		
2-in. pots, 3 to 6 ins.	22.50	
<i>Taxus cuspidata</i> , 2-in.		
pots, 6 to 9 ins.	20.00	180.00
<i>Taxus cuspidata</i> , 2½-in.		
pots, 6 to 9 ins.	22.50	200.00
<i>Taxus hicksi</i> , 2½-in.		
pots, 6 to 8 ins.	25.00	225.00
Transplanted Stock under Lath. Bare roots.		
<i>Arbutus globosa</i> , 2-yr.		
6 to 8 ins.	27.50	250.00
Canadian Hemlocks , 1-yr.		
8 to 10 ins.	27.50	250.00
<i>Taxus cuspidata</i> , 1-yr.		
6 to 8 ins.	32.50	300.00
<i>Taxus cuspidata</i> , 2-yr.		
8 to 10 ins.	37.50	350.00
Seedlings, Well-Established, Potted.		
<i>Cotoneaster apiculata</i> ,		
2-in. pots	22.50	
<i>Mahonia aquifolium</i> ,		
2-in. pots	22.50	
<i>Pyracantha coccinea</i>		
<i>lalandi</i> , 2-in. pots ...	22.50	
<i>Pyracantha coccinea</i>		
<i>lalandi</i> , 2-in. pots		
cutting-grown	22.50	
<i>Pyracantha royaleana</i> ,		
2-in. pots	22.50	
<i>Pyracantha royaleana</i> ,		
2-in. pots, cutting-		
grown	22.50	
Shumardii Oak , sown		
Nov. 1955, 12 to 15 ins.	15.00	
15 to 18 ins.	20.00	

Send for our complete list. Packing at cost.

FLORAL GARDENS NURSERY

S. H. Swartztrauber J. W. Aker
EATON, OHIO

Hydrangea P. G.

Hydrangea P. G. (Tree Form)

Ornamental Trees

Grapevines, 1-yr.

Thorne Brewster

WILLOWBEND NURSERY

FERRY, O.

COMPLETE ASSORTMENT OF

Evergreens, Fruit Trees, Shade
Trees, Roses and Lining-out Stock.

Write for complete list.

ONARGA NURSERY CO.
ONARGA, ILL.

BE SURE TO BUY GOOD ROSES

KRIDER'S is a dependable source for a complete assortment of top-quality patented and standard sure-to-grow roses, at reasonable prices. Our modern refrigerated cold-storage rooms keep stock in perfect condition and full of pep throughout the season. If you are in need of roses order from this ad. We guarantee complete satisfaction, or, if possible, drive over to Middlebury and let us show you the fine quality we offer. Visitors are always welcome. Order now for immediate or later delivery.

Send for complete wholesale price list of shrubs, evergreens, trees, perennials, fruits, lining-out shrubs and evergreens.

PATENTED ROSES—CALIFORNIA-GROWN

2-yr., No. 1	Each Per 20	Each Per 100
Chrysler Imperial, red	\$1.37	\$1.30
Charlotte Armstrong, cerise	1.12	1.05
Festival, thornless red	.90	.75
Mirandy, dark red	1.12	1.05
Peace, yellow and pink	1.25	1.20
Sutter's Gold, deep gold	1.12	1.05
Helen Traubel, two-tone pink	1.37	1.30
Climbing Golden Showers	1.65	...

2-yr., No. 1	Each Per 20	Each Per 100
Carrousel, red	\$1.00	\$0.95
Blanche Mallerin, white	1.00	.95
New Yorker, red	1.00	.95
Mojave, orange	1.50	1.40
Queen Elizabeth, pink	1.25	1.20
Buccaneer, canary-yellow	1.25	1.20
Tiffany, two-tone pink	1.25	1.20
Roundelay, red	1.25	1.20

FLORIBUNDA ROSES

Fashion, coral and red	1.00	.95
Goldlocks, yellow	.75	.70
Red Pinocchio, red	.75	.70
Floradora, orange	.55	.50
Pinocchio, pink	.75	.70
Red Ripples, red	.55	.50
Bagmar, white	.55	.50
Dagmar Prior, salmon	.65	.60
Spartan	1.37	1.30

White Bouquet	1.30	1.20
Improved Lafayette, red	.55	.50
Vogue, cherry-coral	1.00	.95
Lilibet, pink	1.12	1.05
Jimmy Cricket, orange	1.25	1.20
Ma Perkins, shell-pink	1.12	1.05
Geranium Red, red	.75	.70
Circus, multicolor	1.25	1.20

STANDARD HYBRID TEA ROSES

Prices on roses below

	Per 10	Per 100	Per 1000
First-class, 2-yr., No. 1	\$5.50	\$50.00	\$475.00
First-class, 2-yr., No. 1½	4.50	37.50	350.00

PINK VARIETIES

Editor McFarland
Picture
The Doctor
Salmon Radiance
Betty Upchurch
TWO-TONE VARIETIES
Condessa de Santiago
Countess Vandal
Talisman
President Hoover

RED VARIETIES

Christopher Stone
Etoile de Hollande
McGredy's Scarlet
Poinsettia
Rouge Mallerin
Crimson Glory
Red Radiance
RUGOSA ROSES
F. J. Grootendorst, pink
F. J. Grootendorst, red

YELLOW VARIETIES

Golden Dawn
Mrs. P. S. du Pont
Yellow Condessa
Golden Charm
Eclipse
POLYANTHA ROSES
Golden Salmon, salmon
Orleans, pink
Edith Cavell, red

WHITE VARIETIES

K. A. Viktoria
Konigin Luise
HYBRID PERPETUALS
Paul Neyron, pink
Capt. Hayward, red
F. R. Druschki, white

CLIMBING ROSES

Blaze, red everblooming
Gold Rush, yellow everblooming

American Beauty, red
Talisman, two-tone

Paul's Scarlet, scarlet
New Dawn, pink everblooming

White Dawn, everblooming
Coral Pillar, everblooming

ALL ORDERS OF 50 TO 200 ROSES MAY BE FIGURED AT THE 100 RATE, 210 OR MORE TAKE 1000 RATE.

THE KRIDER NURSERIES, INC.

MIDDLEBURY, IND.

HOME OF GOOD ROSES



**Hardy Northern-Grown Stock
at WHOLESALE**

JEWELL NURSERIES, Inc.

Write for Price List.

Box 457, LAKE CITY, MINN.

with a cost of 5.94 cents per basket. The total cost per basket for materials was 26.4 cents.

The plants used in the test are *Prunus laurocerasus schipkaensis*, *Magnolia stellata*, *Viburnum tomentosum*, *Syringa vulgaris* and *Cotoneaster horizontalis*. All the plants were 1 year old when put in the baskets, all having been grown in tin cans except the viburnum and syringa.

The following medium was used: 10 bushels, sphagnum peat; 10 bush-

els, sand; five 4-inch pots, limestone; three 4-inch pots, superphosphate; two 4-inch pots, Agrinix; one 4-inch pot, potassium nitrate.

The plants were placed close together in a block after planting and watering. A mulch of wood chips was put on top and against the side of the baskets. Once the plants had been watered in, they received no fertilizer, pruning or artificial watering. It was not found necessary to weed the block during the summer.

The results of the test are promis-

ing. However, further testing is needed before coming to any conclusion.

Container Mulching

Wintering of container-grown material is still a problem met largely by placing plants in coldframes or pits and by mulching with sawdust, wood shavings or other means. Tests are continuing with low-voltage heating at Cornell University but results of the 1955-56 winter indicate that sawdust mulch worked in

KOLKWITZIA BEAUTY BUSH

	Per 100	Per 1000
9 to 12 ins., T.	\$15.00	\$125.00
12 to 18 ins., T.	22.50	200.00

WASHINGTON HAWTHORN

6 to 9 ins., S.	7.50	65.00
9 to 12 ins., R.P.	15.00	125.00
12 to 18 ins., R.P.	22.50	200.00

VIBURNUM DENTATUM

6 to 12 ins., S.	7.50	65.00
------------------	------	-------

VIBURNUM LANTANA

6 to 12 ins. . . .	10.00	85.00
12 to 18 ins. . . .	15.00	125.00
18 to 24 ins. . . .	25.00

VIBURNUM TOMENTOSUM

6 to 12 ins., S.	10.00	85.00
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PHOTINIA VILLOSA

6 to 9 ins., R.P.	7.50	65.00
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RHODOTYPOS (JETBEAD)

6 to 12 ins. . . .	7.50	65.00
12 to 18 ins. . . .	10.00

PYRACANTHA ANGUSTIFOLIA

6 to 9 ins., R.P.	10.00	85.00
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PYRAMIDAL ARBORVITAE

4 to 8 ins., T., S.	17.50	150.00
---------------------	-------	--------

NEWPORT NURSERY CO.
NEWPORT, MICH.

among the containers and over the top was adequate to prevent soil in containers from freezing without additional heat. The use of the low-voltage heating kept the soil temperature in the middle of the container from 2 to 5 degrees warmer than where mulch alone was used.

Fertilization problems received discussion. It was agreed that in growing plants in containers more critical control must be maintained of watering, fertilizing and pest control programs than is now used for growing stock under field conditions.

During the tour the nurserymen were shown a graduate student project on chlorosis of gardenia. The chlorotic condition could be corrected by the use of chelated formulations of iron. These proved effective in cold soil below 40 degrees F., as well as in warmer soils with normal root action. Plants responded to other iron salts at higher temperatures only.

Under field conditions with pin oak, chlorosis has been corrected during the early flush of spring growth by injection of either iron sulphate or chelated iron into the soil at 18-inch spacing—one pound of material for 6-inch diameter trunk at ground level.

In a student class project, symptoms of nitrogen deficiency, as well as of other nutrients, were demonstrated on rye grass, as was the slow action of urea formaldehyde formulations. This latter material, or a relation of it, was also noted by L. L. Baumgartner as useful in measured capsule quantities for placement in containers such as bushel baskets for trees and other plants.

Retail Selling

Retail selling was covered in two discussion sessions, one chaired by Louis Weinstock on the topic "Efficient Buying Helps to Make Money," and the second chaired by Powers Taylor on "Making the Most of Christmas."

The final event of the program was the presentation by Prof. Max Brunk of a series of five sales-training sound and picture stories on retail selling. This was prepared as a result of a study done by Professor Brunk for the garden foundation of Baltimore, Md., which developed this sales-training program for nurserymen. All sessions having to do with retail sales were well attended, with much audience participation.

Topics brought out by Herbert Handleman and Everett Monin emphasized care in buying enough plant material of well considered items to see one through the planting and sell-

BIG-LEAVED Japanese HOLLY

(Ilex Rotundifolia)

Landscape Grade

12 to 15 ins., B&B	\$2.25
15 to 18 ins., B&B	2.75
18 to 24 ins., B&B	3.25

All plants heavily graded and sheared.

**Cash-and-Carry
Special**

10 ins., 75c

These are heavy, 3-yr. plants, B&B. Ideal for garden stores. We are not in the beetle zone.

CONNOR & AMOS, INC.

129 Old Dutch Rd.

CHARLESTON, W. VA.

See Classified Ad for Liners and Rooted Cuttings

SPRING, 1957

Evergreens

Shrubs

Shade Trees

Fruit Trees

Amur River Privet, all sizes up to 3 to 4 ft., 3-yr., twice cut back.

Barberry Mentorensis, up to 2 to 3 ft.

Special price quantity lots.

C. M. HOBBS & SONS, INC.

BRIDGEPORT, IND.

Established 1875

GOOD NURSERY STOCK

AS WELL AS

ROSES

GERARD K. KLYN, Inc.
MENTOR, O.

ing season without being short when material is most needed.

Better packaging is badly needed to speed up sales and give customer satisfaction. Own-name brands help to bring about repeat business in both fertilizer and grass mixtures. For insecticides and many other items, nationally advertised brands only should be stocked. Ready-to-use products and combinations of insecticides and fungicides in a single simple package for simplified use by amateur gardeners not versed in horticultural detail should be looked for.

To compete with other outlets handling nursery stock, consideration should be given to having on display a complete selection of desirable plant materials, not just one or two items.

The retail session on "Making the Most of Christmas" was the idea of William Boocock, who has made the most of Christmas with nursery materials for some years. Unskilled labor is used for much of the work. Christmas trees, live and cut, are only a small part of what the nurseryman can do. Don Anger, of William Boocock's Four Winds Nursery, is a good landscape draftsman and designer. He is also skillful with his hands and an expert florist when it comes to Christmas make-up of wreaths and fanciful pieces that bring prices appropriate to good design and craftsmanship. Much of the business continues contacts from other seasons and opens up new contacts.

This session ran late, as propagators and turfmen came, stayed and asked questions. Certainly it was a success.

Lawns and Maintenance

Elton Gamin and Raymond Schenk, landscape men, showed pictures of their operations, which are on a mass scale exciting to the imagination.

Mr. Gamin showed the steps in changing three and one-half million square feet from woods to lawns and the mountain of topsoil used in grading. An Olson scraper used in this operation was followed by Mr. Gamin's own invention of a heavy steel beam to which railway spikes were welded for breaking the soil surface and working the lumps down to walnut size. Seeding was done with Cyclone seeders, though Allan Dalsimer afterward matched that experience with a story of hydraulic seeding of 35 miles of road shoulder—seed, fertilizer and water being sprayed in place at a cost of 4 cents a

[Concluded on page 90]

Gladiolus triacanthos inermis
(IMPERIAL Honey Locust)
Plant Patent Pending.

Another new fast-selling profit-maker for you . . .

by the originators
of the spectacular
SUNBURST



Cole's IMPERIAL Honey Locust

...the finest, new, all-around tree in America today

Here's the tree your customers have been waiting for. IMPERIAL has all the characteristics that put Honey Locusts at the top of the list of America's best trees: easy transplanting and maintenance; wide adaptability to soil and location; high resistance to weather extremes, disease and insects.

IMPERIAL grows straight and strong without staking and produces a dense, uniform crown with a minimum of trimming. Numerous, well-spaced branches emerge at nearly 90 degrees, assuring strong crotches. Prolific branching makes a fairly broad, uniform, compact head. Even small two-year-old trees have a rather mature appearance. Foliage is dainty and refined with closely spaced leaves and a fresh green color. No seed

pods have been produced on the thousands of specimens observed.

Cole's new IMPERIAL is a superior Honey Locust at comparatively low price. It's sure to please your customers and add to your profits. Order now to be sure of your supply.

IMPERIAL PRICES FOR 1957:

	Each 10 to 29	Each 30 to 299	Each 300 and up
¼ to 1-in. cal.,			
8 to 10 ft.	\$5.35	\$4.85	...
1 to 1½-in. cal.,			
8 to 10 ft.	4.00	5.50	\$5.00
1½ to 1½-in. cal.	6.25	7.50	6.75

Cole Nursery has been recognized for 75 years as a reliable source of high-quality landscape material. We can supply your needs promptly in large quantity and wide variety. Write for our latest catalog showing all items.

NURSEYMEN FOR 75 YEARS

THE **COLE** NURSERY CO.
PAINESVILLE, OHIO

GINKGO BILOBA

Transplanted Specimens, XXXX

	B.R. Each Per 100	B&B Each Per 100
2½ to 3-in. cal., 12 to 15 ft.	\$17.50	\$25.00
3 to 3½-in. cal., 15 to 18 ft.	22.00	30.00

THE WM. A. NATORP CO.

4400 Reading Rd.

CINCINNATI 29, O.

Visit our nurseries when in Cincinnati

PACHYSANDRA TERMINALIS

Strong, rooted cuttings.

\$1.25 per 100; \$10.00 per 1000.

Bentley's HARDY PLANTS

2559 Mentor Ave.
MENTOR, O.

FORSYTHIA LYNWOOD GOLD

Per 100
Rooted cuttings, outside frame... \$10.00
2¼-in. pots, 1-yr. 15.00
15 to 18 ins., 2-yr., XX 35.00
24 to 36 ins., 3-yr., XX 50.00

GILSON GARDENS
PERRY, O.

THIS BUSINESS OF OURS

Reflections on the Problems of Nurserymen

By E. Sam Hemming

DEPENDENT PLANTS

Among the higher types of plant life, the flowering plants, there are few that are parasitic upon other plants; in fact, they are rare exceptions. Mistletoe is the most notable and perhaps the only one with green leaves. There are several species in the Americas. The two most common are parasitic, respectively, on coniferous and on deciduous plants. The mistletoe seed is enclosed in a viscous, fleshy, white berry which helps it stick to the bark of a tree, usually in a crotch. From the nature of the seed one must assume that birds are the chief agent of dissemination. It seems necessary for the seed to germinate and establish itself in the bark of a tree of its own accord. I recall that my father's repeated attempts to establish mistletoe in a tree failed. In this area, it grows usually on the red maple and sour gum. When the seed germinates, it produces a unique rootlike growth called haustorium. This growth penetrates and draws sustenance from the sap-bearing tissue of the host tree, although mistletoe leaves contain chlorophyll and can manufacture food.

Mistletoe is considered a plant disease, although it usually does not seriously affect its host. A tree heavily loaded with mistletoe may be somewhat stunted.

Another parasitic plant is the dodder, and it can rightly be called a disease, for it usually stunts and kills its host. Since it is an annual, the death of its host does not affect its survival. Dodder can be quite a nuisance in farms and nurseries. The seed of dodder does its germinating in the soil, but the plant, not having chlorophyll, must at an early stage attach itself to its host. As soon as it does, its own roots cease to sustain it, and the plant obtains both its food and its moisture from the stem of the plant to which it is attached. It often spreads to adjoining plants, stunting them considerably until it goes to seed, by which time the host is often dead.

The members of the broomrape family are parasitic but only occasionally are a nuisance to cultivated plants. They usually attach themselves to their host underground at

the roots. Similar to the broomrapes are the members of the Indian-pipe group, which are usually saprophytic on the roots of woodland plants and at the most are a botanical curiosity.

Although we ordinarily grow independent plants, which may be parasitized, sometimes the situation is reversed and the parasite or dependent plant itself is cultivated. A large group of the cultivated dependents, of course, is the orchid family, particularly the tropical forms. Most of these are epiphytes, which obtain physical support only from their hosts but obtain water, carbon dioxide and nitrogen from the air. They derive whatever minerals they need from bits of decaying organic matter in the tree crotch and are in no sense parasitic.

Other dependent plants are those that use their host as a climbing support. In the tropics they are usually termed lianas. The mere physical support they obtain from their hosts is a vital necessity, for without it they would not receive the light they need.

The pretty little trailing arbutus is another dependent plant. Its health and existence seem to be dependent upon a symbiotic relation with a fungus. The actual role of the fungus is not clear, but may be to help the plant obtain its food. This relationship probably has a limiting effect on the natural dissemination of the plant and may be as much a factor in its eventual extinction as is careless collecting.

Plants that are in some way dependent on other plants may be more common than we realize, for the relationship is not always apparent. We have often noticed that old English boxwood grows at its best under the shade of black locust trees. The combination of light shade and the nitrogen-fixing legume is ideal.

Even among the lower forms of

MULTIFLORA ROSE

(*Rosa multiflora japonica*)

Conservation grade, 3 mm.

Per 1000

8 to 12 ins.	\$13.50
2/16 to 3/16-in. cal., 10 to 15 ins.	18.00
3/16 to 1/4-in. cal., 15 to 18 ins.	24.00
1/4 to 3/8-in. cal., 18 to 24 ins.	36.00

Plants will be top and root trimmed prior to shipping. All prices F.O.B. Elsberry. No packing charge.

Write for Quantity Prices

You will find us your best source of Multiflora whether you need a few plants or a few million.

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GROWN
IS HARDY ...**

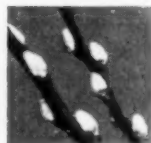
FORREST KEELING NURSERY
ELSBERRY, MISSOURI



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PINK FRENCH PUSSY WILLOW

(*Salix Discolor* Selection)



Catkin sheath rich mahogany-red with large attractive silvery-pink catkins when mature.

	Per 100	Per 1000
2 to 3 ft.	\$35.00	\$300.00
18 to 24 ins.	30.00	250.00
15 to 18 ins.	25.00	200.00
Liners	12.00	100.00

BEARDSLEE NURSERY

PERRY, O.

ORNAMENTALS

**TREES SHRUBS
EVERGREENS**

Wholesale growers of a general assortment for the best landscape plantings.

BRYANT'S NURSERIES

Princeton, Illinois

Stock that is hardy.

WHOLESALE

SUMMIT NURSERIES
STILLWATER, MINN.



Wholesale growers of the best Ornamental Evergreens Deciduous Trees Shrubs and Roses

Write for our current trade list.

The Kallay Brothers Co.
1251 Madison Ave. FAIRBANKS, ALASKA



Scarff's Nursery, Inc. New Carlisle, Ohio

Special List — Top-Quality Stock — Finest Miami Valley Grown —

	Each 1000 rate
Barberry, Red, 3-yr., field	
18 to 24 ins.	\$0.35
24 to 30 ins. ....	.45
Calycanthus floridus, 24 to 30 ins.	.50
Caryopteris (Blue Mist), 2-yr.	.30
Cornus elegantissima, 18 to 24 ins.	.45
Cornus kelseyi (Dwarf Red Twig),	
15 to 18 ins. ....	.35
Cotoneaster divaricata, 2 to 3 ft.	.80
Cydonia japonica (Pink), 2 to 3 ft.	.45
Deutzia lemoinei compacta,	
15 to 18 ins. ....	.25

Euonymus carrierei, Newport and Sieboldi (Specimens B&B)	
15 to 18 ins.	\$1.00
18 to 24 ins.	1.25
24 to 30 ins.	1.50

Euonymus yedoensis (Bittersweet Tree)	
2 to 3 ft. ....	.45
36 to 42 ins. ....	.55
Forsythia Arnold Dwarf, 15 to 18 ins.	.35
Forsythia Lynwood Gold and Spectabilis	
2 to 3 ft. ....	.35
3 to 4 ft. ....	.45
Hamelis vernalis (Winter Flowering Witch Hazel)	
2 to 3 ft. ....	.45
3 to 4 ft. ....	.55
Hydrangea A.G., 18 to 24 ins.	.40
2 to 3 ft. ....	.45
Hydrangea macrophylla Rosea No. 1 (Large French Pink)	.30
Hydrangea P.G., 2 to 3 ft.	.45

Hypericum kalmianum (Pot O' Gold),	
Profuse-blooming, hardy and widely adaptable. A most attractive dwarf, compact shrub with silvery-blue foliage. Per 100	
15 to 18 ins.	\$40.00
18 to 24 ins.	45.00

Kolkwitzia amabilis, 3 to 4 ft.	.55
Lonicera, Gold Flame, 2-yr. vine	.35

BUSH HONEYSUCKLES

Finest we have ever grown	
Lonicera fragrantissima	
2 to 3 ft.	\$0.10
3 to 4 ft. ....	.50
Lonicera maximowiczii sachalinensis, triple red	
2 to 3 ft. ....	.40
Lonicera zabeli, red, 3 to 4 ft.	.45
4 to 5 ft. ....	.60

	Each 1000 rate
Ligustrum Regel's (True Type),	
18 to 24 ins.	\$0.30
24 to 30 ins. ....	.35
30 to 36 ins. ....	.45
Ligustrum Vicary Golden, true,	
best color, 8 to 10 ins. ....	.17½
10 to 12 ins. ....	.20
Philadelphus virginialis, 2 to 3 ft.	.45
Prunus tomentosa, 18 to 24 ins.	.25
2 to 3 ft. ....	.35
Rhodotypos kerrioides, 2 to 3 ft.	.40
Ribes, alpinum, 15 to 18 ins.	.45
Spiraea Anthony Waterer,	
18 to 24 ins. ....	.45
Spiraea prunifolia, 3 to 4 ft.	.45
Spiraea thunbergi, 2 to 3 ft.	.45
Spiraea vanhouttei, 3 to 4 ft.	.35
Tamarix Summer Glo, pink	.35

THE VIBURNUMS

Viburnum americana, 2 to 3 ft.	\$0.45
3 to 4 ft. ....	.55
Viburnum burkwoodi	
30 to 36 ins., B&B	2.00
36 to 42 ins., B&B	2.25
Viburnum carlesii, 2 to 3 ft.	2.75
B&B	2.75
Viburnum lantana, 2 to 3 ft.	.45
Viburnum lentago (Nannyberry)	
3 to 4 ft. ....	.45
Viburnum prunifolium (Blackhaw), 2 to 3 ft.	.35
Viburnum wrightii, 2 to 3 ft.	.40

Willow, French caprea	
2 to 3 ft. ....	.20
4 to 5 ft. ....	.35

SMALL FRUIT PLANTS

We have our usual good supply of Berry Plants. See our Trade List or send us your want list for quotation.

LINING-OUT STOCK

	Each 1000 rate
Barberry, Crimson Pygmy, 3 to 4 ins., T.	\$0.25
Hydrangea macrophylla rosea (New French Pink)	.20
Kerria japonica flara-plena, 2 ins.	.08½
Koeleruteria paniculata (Golden Rain)	
2-yr., S., 18 to 24 ins. ....	.20
2-yr., S., 2 to 3 ft. ....	.30
Kolkwitzia amabilis	
2-yr., 12 to 18 ins. ....	.15
2-yr., 18 to 24 ins. ....	.20
Ligustrum Regel's (True Type)	
6 to 9 ins. ....	.10
Ligustrum Vicary Golden, R. C.	.10
Prunus subhirtella pendula (Weeping Cherry), 2-yr., S., 18 to 24 ins.	.25
2 to 3 ft. ....	.30
Pyraeantha, Runyan Red, hardy, fruitful, orange-red, 6 to 9 ins., T.	.25
Ribes alpinum, 6 to 9 ins., T.	.15
Viburnum burkwoodi	
2-yr., S., 15 to 18 ins. ....	.20
2-yr., S., 18 to 24 ins. ....	.25
Viburnum tomentosum (Double File Viburnum)	
6 to 12 ins. ....	.10
Viburnum wrightii	
2-yr., S., 12 to 15 ins. ....	.10

LINING-OUT EVERGREENS

Arborvitae, Dark Green American	
10 to 15 ins., 2-yr., T.T. ....	.30
Juniper, andorra	
9 to 12 ins., T. ....	.20

Quantity prices on request. Our wholesale price list contains many other sizes and varieties. Send for your copy today.

Send for Complete Trade List and Prices of Fruits, Ornamental Shrubs, Vines, Evergreens, Special Mail-order Items and Lining-out Stock.

plant life which we commonly think of as parasitic types, such as the fungi, there are some peculiar arrangements. The most notable are the lichens, which are common on trees, stumps and rocks. In the far north they are the main form of plant life. Lichen is really a dual organism, composed of an alga and a fungus growing together for their mutual benefit.

LARGE TREES FOR INDIANA

[Continued from page 8]

too common in the midwest, particularly in the soft maples. Planting distances will vary with tree species and varieties for optimum results. To put it another way, every house lot may not benefit by the same number of street trees, trees on the lot or the same kind of tree.

A knowledge of these factors and of tree species and varieties should be the basis of any tree program. It would be as true for a public utility interested in producing kilowatts for

WHAT HAVE YOU IN SURPLUS?

Frank's Nursery Sales looking for promotion goods of any type.

Evergreens, roses, shade trees, hedge plants, flowering shrubs.

Quote prices and quantities available.

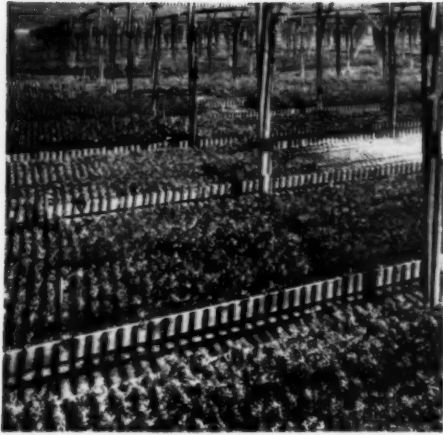
FRANK'S NURSERY SALES

Detroit Super Garden Centers

Main Office: 14049 Jos. Campau

DETROIT 12, MICH.

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YOU GET SELECTION when you order now

We try to anticipate your needs.

Trouble is, even the world's largest quantity and selection of pot-grown liners can run out of certain varieties when demand is extra high.

But you know what you want. So let's get together

A FEW OF MANY POPULAR LINER VARIETIES AVAILABLE

Minimum order — 25 per 2 1/4-in.

CONIFERS

	Price per 100
<i>Cedrus deodora</i>	\$20.00
<i>Cupressus arizonica</i> (seedlings) ..	15.00
<i>Juniperus virginiana burki</i>	25.00
<i>Pinus mugo mughus</i>	20.00
<i>Pinus radiata</i>	18.00
<i>Pinus sylvestris</i>	15.00
<i>Pinus thunbergi</i>	18.00
<i>Thuja orientalis bakeri</i>	18.00
<i>Thuja orientalis pyramidalis</i>	18.00
<i>Juniperus chin. pfitzeriana</i>	18.00*
<i>Juniperus chin. pfitzeriana Blue</i> ..	20.00*

Juniperus chin. pfitzeriana compacta

GENERAL CATALOGS

<i>Abelia grandiflora</i>	\$15.00
<i>Acanthus mollis</i>	18.00
<i>Albizzia julibrissin</i>	18.00
<i>Althaea Pink Delight</i>	18.00
<i>Aralia sieboldi</i>	15.00
<i>Berberis mentorensis</i>	20.00
<i>Berberis sargentiana</i>	20.00
<i>Buxus microphylla rostrata</i>	15.00
<i>Callistemon lanceolatus</i>	20.00
Improved	20.00

*Available for delivery after April 1, 1957.

LOW-COST SHIPPING

Your order of lining-out stock can be delivered to your nursery at low shipping costs. For example, a 2 1/4-in. liner, placed in a lightweight shipping pot, costs only 2c each for shipping to and from the Rockies, 3 to 3 1/2c to midwestern, southern and some other areas, only 4c to other eastern states.

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Contains photos, descriptions on over 1200 varieties of container and pot-grown ornamentals.

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for spring delivery!

When you order MN liners now for spring delivery, we'll save you your preferred varieties in the exact quantities you require for "growing-on."

Of course, thousands of MN liners are always available for immediate delivery. But the way to get sure selection-protection on all varieties is to order ahead.

AVAILABLE FOR IMMEDIATE OR SPRING DELIVERY

5 per 2 1/4-in. pots Free packing.



Price per 100	Price per 100	Price per 100
Cotoneaster zabelli \$18.00	Ligustrum vicari \$18.00	
Eriobotrya japonica 15.00	Liquidambar styraciflua 18.00	
Euonymus japonicus	Mahonia beali 20.00	
grandifolia 15.00	Nandina domestica 15.00	
Gardenia Mystery 18.00	Pyracantha cocci. wyatti 18.00	
Gardenia veitchi 18.00	Pyracantha Government Red 18.00	
Hypericum hidcote 18.00	Rosa Oakington Ruby 20.00	
Ilex aquifolium (seedlings) 18.00	Viburnum burkwoodi 20.00	
Ilex crenata convexa bullata 18.00	Viburnum opulus sterile 18.00	
Ilex cornuta (seedlings) 15.00	Viburnum rhytidophyllum 18.00	
Ilex cornuta burfordi 18.00	Xylosma senticosa 20.00	
Ilex Green Island (Pat. No. 817) 35.00	Zelkova serrata 20.00	

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We invite you to open an account with us. It's convenient. Order all your needs easily. We ship to you—bill you later. As an open account customer, you will not be required to send full or partial payments with each order. We will be pleased to open an account for you. Simply send us credit references.



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P.O. BOX Q, AZUSA, CALIFORNIA

FOR SPRING SALES ARBORVITAE Pyramid Dark Green American Woodward Globe

These common but good varieties don't need to be sold in the spring. They sell themselves.



Dark Green American Arborvitae
One of 5 blocks of Berryhill's good strain. Heavy, well-filled, generously graded.

Pyramid Arborvitae	Each
3 to 3½ ft.	\$3.00
3½ to 4 ft.	3.25
4 to 4½ ft.	3.65

Dark Green American Arborvitae
3 to 4 ft., heavy 3.25

Woodward Globe Arborvitae
15 to 18 ins., heavy 1.85
18 to 24 ins., heavy 2.35

We offer these good varieties, plus our line of Taxus, Juniper, other Arborvitae, Euonymus, Cotonaster, Ilex and others. Some lining-out, many B&B.

See Lewis S. Bookwalter
Frank Turner
at the winter conventions.

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THE BERRYHILL NURSERY CO.

Mail Address: P. O. Box 696

Location: 4½ miles N.E. of town
on State Route No. 4

SPRINGFIELD, OHIO

customers as for a city interested in a sound tree program for its streets and parks or a homeowner in developing his home grounds. In fact, such an approach to the selection of kinds of trees for planting would result in the use of small trees in many situations which are not included in this presentation. Some desirable medium-size trees are not mentioned, as they might also be considered in a list of small trees.

Overcrowding Problems

Trees that naturally spread 70 to 100 feet, spaced from 20 to 40 feet, on streets, farmsteads and private and public properties are expensive to maintain, partly because of dying and dead undergrowth, resulting from the search for light. Turf problems are bigger. Overcrowded trees are more subject to breakage. When trees have been planted close with the idea of getting quick shade, they should be thinned before they destroy each other in form. The life span of overcrowded trees is usually reduced by approximately one half.

Florence B. Robinson says in her book on "Planting Design": "The requirements of a good street tree are exacting. For such use a tree should be: Entirely hardy; long-lived; not too slow of growth; strong of fiber, neither brittle nor given to breaking in storms; tolerant to smoke and soot and dust and gases; neat, not untidy in habits, not dropping a constant litter; possessed of a foliage that will wash clean in rain; of a height and spread suited to the width of the given street; naturally high branching, with ascending branches; possessed of a tough and firm bark, not easily bruised or damaged; capable of giving a good shade, but not so dense that it keeps walks and pavements wet beneath it; possessed of a good, compact and restricted root system or one capable of being restrained; able to exist with a minimum of food and moisture; possessed of good form, good color, good texture, good habits."

Weaknesses Can Be Offset

One can readily see that few, if any, trees can meet all of these requirements, but many of them have enough strong characteristics to outweigh their weaknesses.

The tree of heaven, Ailanthus glandulosa, and the maidenhair tree, Ginkgo biloba, are two trees that will survive the rigors of congested city conditions. The tree of heaven has so many faults compared to many of the trees in the following list that it has the distinction of be-

SHADE and FLOWERING TREES

	Per 10	Per 100
Birch, European White		
5 to 6 ft.	\$15.00	\$125.00
6 to 8 ft.	25.00	225.00
8 to 10 ft.	32.50	
10 to 12 ft.	45.00	
Birch, Cut-Leaved Weeping		
6 to 8 ft.	30.00	275.00
8 to 10 ft.	40.00	
10 to 12 ft.	52.50	
1½ to 2-in. cal. B&B	\$20.00 each	
Dogwood, Pink		
3 to 4 ft. B&B	40.00	375.00
4 to 5 ft. B&B	52.50	500.00
5 to 6 ft. B&B	65.00	
Elm, American		
6 to 8 ft.	17.50	150.00
8 to 10 ft.	27.50	225.00
Elm, Chinese		
8 to 10 ft.	20.00	175.00
1½ to 1½-in. cal.	27.50	250.00
1½ to 2-in. cal.	42.50	375.00
2 to 2½-in. cal.	65.00	550.00
2½ to 3-in. cal.	82.50	
Hawthorn, Washington		
4 to 5 ft. NB	27.50	
Hawthorn, Paul's Scarlet		
4 to 5 ft. NB	32.50	
Locust, Thornless Honey		
5 to 6 ft.	15.00	125.00
6 to 8 ft.	22.50	200.00
8 to 10 ft.	30.00	
Maple, Norway		
6 to 8 ft.	32.50	300.00
8 to 10 ft. 1 to 1½-in. cal.	45.00	425.00
8 to 10 ft. 1½ to 1½-in. cal.	80.00	
Maple, Schwedler's		
6 to 8 ft.	40.00	350.00
8 to 10 ft. 1 to 1½-in. cal.	52.50	
8 to 10 ft. 1½ to 1½-in. cal.	65.00	
Maple, Silver		
8 to 10 ft. 1 to 1½-in. cal.	20.00	175.00
8 to 10 ft. 1½ to 1½-in. cal.	27.50	250.00
10 to 12 ft. 1½ to 2-in. cal.	40.00	375.00
2 to 2½-in. cal.	70.00	600.00
2½ to 3-in. cal.	87.50	
OAK—American White, Bur, Austrian Turkey, English White, Scarlet, Pin		
6 to 8 ft.	35.00	
Oak, Pin		
3 to 3½-in. cal. B&B	\$45.00 each	
Poplar, Bolleana		
8 to 10 ft.	17.50	
2 to 2½-in. cal.	60.00	
Poplar, Lombardy		
6 to 8 ft.	6.50	60.00
8 to 10 ft.	8.50	80.00
WILLOW—Thurlof Weeping, Babylonica Weeping, Golden Weeping		
6 to 8 ft.	16.00	140.00
8 to 10 ft.	22.50	

NOTE: Write for Complete Wholesale Price List, also submit want list for quotations on other varieties and sizes in shade stock.

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WAYNESBORO, VIRGINIA

LINING-OUT and FINISHED STOCK

Ask for List

THE COTTAGE GARDENS

Our 32nd Year

Nick I. W. Kriek—Harold E. Hicks
LANSING 17, MICH.



GLOWING EMBER

(TRADE-MARK)

FLOWERING QUINCE

We are proud to be the introducers of this superior strain of Flowering Quince. It took many years of observation and selection to come up with this upright growing shrub of uniform habit, dense growth and with brilliant flame-red flowers. These desirable characteristics make GLOWING EMBER an outstanding shrub suitable for specimen, screen, hedge or group planting. The closely set flowers are brilliant in shade and produce a smashing effect in early spring before the leaves are fully developed.

	Per 10	Per 100	Per 1000
3 to 3 1/2 ft.	\$7.00	\$60.00	\$550.00
2 to 3 ft.	5.50	50.00	450.00
18 to 24 ins.	4.50	40.00	350.00
12 to 18 ins.	3.50	30.00	250.00

Growers for the wholesale trade. Write for price list.

THE WILLIS NURSERY CO.

"Your Wholesale Nurserymen"

OTTAWA, KAN.

ing perhaps the least desirable tree for general use, but at the same time perhaps the best for the most difficult city environment.

The maidenhair tree is not in popular usage because it grows so slowly, the form is spiky and the female tree has fruit of an unpleasant odor. Otherwise, the staminate tree is almost free of faults.

Other trees that are successful in congested city conditions are the Oriental sycamore, the pin oak and the sweet gum.

The list of large and medium-size deciduous trees in the table shown before should provide selections that are suitable for use in midwestern towns, suburbs, rural areas, parks, public plantings and residential areas that are not too congested.

CLARENCE OWENS, Brentwood, Mo., has expanded and reorganized his business, formerly called Landscape Service Co., Route 5, Poplar Bluff, Mo. He now operates Owens Nursery at Poplar Bluff, a wholesale and retail nursery, and Brentwood Gardens, 8731 Manchester, Brentwood 17, Mo., a nursery sales lot and garden supply store, from which he carries on a landscape contracting business.

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P. O. Box 33
MENTOR, O.

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HANKOW CORKSCREW TREE (Salix matsudana tortuosa)

Unusual landscape addition to tree lawn or shrub border. Branches both large and small grow upward with an exotic corkscrew twist.

A charming hardy Oriental tree that will delight you and your horticulturally interested customers.

	Per Each	Per Dozen
4 to 5 ft.	\$2.50	\$25.00
6 to 8 ft.	3.50	35.00

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Rooted Cuttings

CUNNINGHAM GARDENS, INC.
Waldron, Ind.

EUONYMUS FOR SPRING

Compactus

18 to 24 ins., heavy B.R.\$0.80
18 to 24 ins., B&B 1.25

Alatus

3 to 4 ft., B.R. 1.50
3 to 4 ft., B&B 2.00

WADE & GATTON NURSERIES
BELLVILLE, OHIO

TAXUS SEEDLINGS

2 to 3-yr. Seedlings—Heavy Stock
Trade list on request.

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EVERGREENS

Growers of Quality Evergreens
Lining-out Stock a Specialty

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EVERGREEN NURSERY CO.
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Long-Range Tax Planning Aids Small Businessman

Long-range tax planning in today's business world of high tax rates is no longer big business foolishness. Last-minute tax worrying with no year-round tax thinking can result in the loss of sizable savings for small and medium-size businesses when it comes time to file a tax return.

For example, assume that last summer you were forced to replace your air conditioner. You shopped around and found you could either sell your old unit to a private party for \$500, or a dealer in town would give you a trade-in allowance of \$500 on it. That seemed like six-of-one-half-a-dozen-of-another to you; so without thinking — or worrying — about tax matters you traded in the old air conditioner.

To prove how such a seemingly simple business decision as this can affect how much tax you will have to pay, let us assume further that the air conditioner which you traded had originally cost \$2,500 and that you had taken \$1,000 in depreciation on it. This meant its cost for tax purposes was \$1,500, and you were going to "lose" \$1,000 whether you accepted the dealer's trade-in allowance of \$500 or sold to the private party for \$500.

So far, still six-of-one-half-a-dozen-of-another, but now since you elected to trade-in your old air conditioner, let us see how you can claim a deduction on a tax return for your \$1,000 loss. The answer is simple. You can't. All you can do is add the amount of the loss to the cost of your new unit and eventually receive tax credit for your loss in the form of slightly higher depreciation deductions.

On the other hand, if you had made a bona fide sale of your old unit to the private party and a separate purchase of a new unit from a dealer, you would have established a \$1,000 loss, which could be claimed as a loss deduction on a tax return and used to offset regular income.

It is not always true, of course, that a loss deduction on the tax return is worth two in the bush of

depreciation, but a general rule to consider when you are trying to decide whether it would be more advantageous taxwise for you to sell or trade in an asset is: Sell "loss" property to obtain a deduction, and trade "profit" property to avoid the tax which must be paid on any profit realized from the sale of an asset.

You may find that you have sold yourself into a capital gains tax or traded yourself out of a loss deduction if you have not figured your depreciated costs correctly. This is a matter you should discuss with a certified public accountant. Not only can he verify the accuracy of your mathematical computations, but he can also explain the advantages and disadvantages of the various methods used to compute depreciation. It could be that the method you used or are using is not the one most suited

to your business needs from a tax standpoint.

For example, if you asked a CPA whether you should use the straight-line or declining balance method to depreciate your new air conditioner, one of the first questions he might ask you would be: What are your cash requirements and what are your profits likely to be? If you are thinking of expanding and need additional cash within the next few years, he might recommend that you use the new declining balance method to compute depreciation.

Declining Balance Technique

The declining balance method speeds up or increases depreciation rates. This starts the chain reaction to your objective of retaining cash in the business, because when you increase depreciation rates you also increase allowable depreciation deductions on your tax return. The amount you may write off the first year is twice what it would be if you used the straight-line method; so by applying a \$1,000 instead of \$500 depreciation deduction against your regular income, you are going to reduce your taxes, and cash that does

MUST CLEAR BLOCK

VIBURNUMS

300	Burkwoodi, 4 to 5 ft., B&B	}	\$3.50	\$3.00
300	Carlesi, 3 to 4 ft., B&B			
700	Juddi (Improved Carlesi), 3 to 4 ft. (all above nicely budded)			

VIBURNUMS, heavy, transplanted specimens

400 Lantana, 6 to 7 ft.	1.75	1.50
200 Lentago, 5 to 6 ft.		
200 Tomentosum, 4 to 5 ft.		
100 Tomentosum Plicatum, 5 to 6 ft.		
100 Trilobum, 5 to 6 ft.		
200 Setigerum, red, 4 to 5 ft.	3.00	2.50
100 Sieboldi, 5 to 6 ft.		

TREES

250 Gleditsia inermis, 10 to 12 ft., heavy, 1 1/2 to 1 3/4-in. cal.	3.00	2.50
(Thornless Honey Locust)		

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This article is based on information supplied by the American Institute of Accountants, the national professional organization of certified public accountants, and checked for technical accuracy by the internal revenue service.

not have to be paid out in federal taxes can be retained in the business for expansion purposes.

It seems all good things eventually come to an end, however, and while in the first year the declining balance depreciation rate may be double that of the straight-line, this differential diminishes in succeeding years until declining balance deductions are even less than they would be under the straight-line method. This is why it is important that you consider current and future earnings before you select a depreciation method.

Straight-Line Method

For example, if your current earnings are low, or if you are putting in a new line of merchandise and the results of this expansion will take a few years to show in your earnings, it might be more advantageous taxwise for you to use the straight-line method of computing depreciation.

The straight-line method does not speed up depreciation deductions. It spreads them out equally over the estimated useful life of the asset; so when you use a straight-line method you are saving, in a sense, for a rainy day. When your earnings improve or increase, you will have more substantial depreciation deductions to apply against those earnings. There usually is no point in increasing a loss or reducing low earnings by claiming additional depreciation deductions when you do not need them.

A point to remember when you are trying to decide whether to buy new or used equipment is that secondhand equipment must be depreciated by the straight-line method. This tax factor should be considered, because loss of the opportunity to use the declining balance method with its rapid write-off feature may cancel any immediate savings effected by the purchase of used equipment.

Business Setup

The matter may have been decided and forgotten many years ago, but a basic question businessmen should consider from time to time—and one which has many tax implications—is whether to do business as a proprietorship, partnership or corporation. There may be personal or professional factors that force the selection and maintenance of a noncorporate form of organization, but depending on the earnings of the business and the amount of those earnings you may need to withdraw, there are certain tax advantages to be gained by incorporating a new or expanding company.

Since proprietorship and partner-

TREE LIST FOR SPRING

	Per 100	Per 1000	Per 1000 in 10,000 lots
Colorado Blue Spruce			
(3-0), 3 to 6 ins.	\$ 6.00	\$ 30.00	.....
(3-0), 6 to 10 ins.	10.00	50.00	\$47.50
(3-1), 6 to 12 ins.	16.00	80.00	.....
8 to 12 ins., XX	40.00	350.00	.....
12 to 18 ins., XX	75.00	.....	.....
Black Hills Spruce			
6 to 9 ins., XX	20.00	150.00	.....
10 to 15 ins., XX	32.00	300.00	.....
White Spruce			
(3-0), 4 to 8 ins.	10.00	42.00	40.00
Norway Spruce			
(3-0), 6 to 12 ins.	10.00	45.00	42.50
Douglas Fir			
(2-0), 3 to 6 ins.	8.00	30.00	28.00
(3-0), 4 to 8 ins.	10.00	35.00	.....
4 to 8 ins., X	15.00	85.00	.....
8 to 12 ins., X	20.00	135.00	.....
Mugho Pine, Tyrolean, top-sheared			
(3-0), 3 to 5 ins.	12.00	60.00	.....
Mugho Pine, Swiss Mt., sheared			
(3-2), 4 to 8 ins.	25.00	160.00	.....
Taxus cuspidata capitata, sheared			
6 to 9 ins., XX	55.00	.....	.....
Riga Scotch Pine			
(2-0), 2 to 3½ ins.	5.00	16.00	14.00
(2-0), 3½ to 8 ins.	8.00	28.00	26.00
(2-1), 4 to 10 ins.	12.00	55.00	.....
Austrian Pine			
(2-1), 3 to 8 ins.	12.00	55.00	.....
White Birch			
3 to 4 ft., XX	75.00	.....	.....

TERMS: Cash with order please, or 25% deposit, balance before shipment. 50 at 100 rate, 500 at 1000 rate, all seedlings sold in multiples of 50, all transplants sold in multiples of 10. Minimum order \$10.00. Packing charges included in price of trees.

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Scotch, Austrian and Red Pine

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HARDY PLANTS Bulbs and Shrubs

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CERTIFIED BLUEBERRY PLANTS

Two and three-year-old. 16 varieties.

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NORTHERN-GROWN STOCK

Evergreen Liners
Bleeding Hearts
Ornamental Shrubs
Fruit Trees
French Lilacs

Philadelphus Minnesota Snowflake
(Plant Patent No. 538).

Send for list.

J. V. BAILEY NURSERIES

ST. PAUL 6, MINN.

LYNWOOD GOLD

FORSYTHIA

Recent import from Ireland. Full-flowered; deep golden color. Heavy, outdoor frame-rooted cuttings.

\$12.00 per 100, \$100.00 per 1000

BEARDSLEE NURSERY, Perry, O.

The Public Likes HOLLY



Last March at our Cleveland Home and Flower Show we sold 1325 of the above liners at a retail price of \$1.25 each.

We know the public likes
HOLLY
THE No. 1 BARGAIN

Not one-year but two-year holly, root-bound and bursting at the seams ready to sprint ahead and make you money.

PRICES PER 100

Our selection of varieties

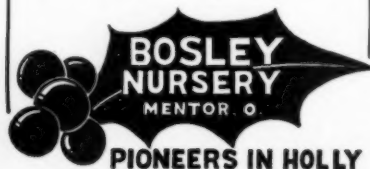
Up to 249	250 to 1249	1250 and up
\$65.00	\$55.00	\$45.00

Your selection of varieties

Up to 249	250 to 1249	1250 and up
\$75.00	\$65.00	\$55.00

Also our 3-year contract prices are much lower.

Send for our list or see us at the Illinois, Ohio or Michigan conventions.



ship income is taxed at individual rates, which range anywhere from 20 per cent to 91 per cent, and corporation earnings are taxed at corporate rates of 30 per cent on the first \$25,000 earned during the year and 52 per cent on the excess, it might appear that if you have relatively low income the proprietorship-partnership rates are lower. However, you must also consider that the corporate tax carries with it the privilege of deducting a reasonable salary paid to an employee-owner. The employee-owner has to pay a personal tax on his salary, of course, but if he were not incorporated, he would have to pay a personal tax on all the money earned by the business.

If the retained earnings of the company are taxed at a corporate rate which is lower than what the personal tax rate would be, the employee-owner would benefit by having additional funds available in the corporation for expansion purposes. These funds may be accumulated in a corporation up to \$60,000 without further tax penalties, and even higher if the corporation can prove a need for them.

Watch Out for Double Tax

These advantages — while they may cut your current tax bill and increase working capital for expansion needs — can be lost if you have jumped into a corporation without first reviewing your own long-range cash requirements. If you are continually forced to withdraw money from the corporate earnings to pay personal expenses, you will have to withdraw these funds in the form of dividends. That means the corporation will have to pay tax on the earnings you are withdrawing as dividends, and you will have to pay tax on the dividends received. The double tax on earnings and dividends can nullify any tax advantage from incorporation when earnings must be withdrawn immediately as dividends.

Many businessmen seek professional advice about tax matters as they do professional assistance with their golf game—when the slice has become almost unbearable. You can save tax dollars by realizing that business decisions made in the fall affect the amount of tax you must pay in the spring. Practice year-round tax thinking and consult a certified public accountant when you are in doubt as to the tax effect of even the most routine business decision.

BERG BROS., Brampton, Mich., have constructed a new building, 20x40 feet, for growing plants.

SEEDLINGS FOR BEDDING

These are seedlings too light for field planting but are suitable for bedding or potting.

Those marked (*) can be shipped now, the others in spring.

\$50.00 Per 1000

Kolkwitzia
Pyracantha angustifolia
Viburnum tomentosum

\$35.00 Per 1000

Washington Hawthorn
Viburnum dentatum
**Viburnum lentago*
**Photinia villosa*
**Syringa vulgaris*
*European Mt. Ash
**Mahonia aquifolium*

\$17.50 Per 1000

*Red Barberry
(Certificate needed for interstate shipment.)

NEWPORT NURSERY CO.
NEWPORT, MICH.

STRAWBERRY PLANTS

Illinois-Grown	Per 1000
Blakemore	\$ 7.50
Senator Dunlap	7.50
Tennessee Beauty	7.50
Armour	8.50
Robinson	8.50
British Sovereign	11.00
Gem (Everbearing)	12.50
Superfection (Everbearing)	12.50

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ANNA, ILL.

Over 100 Years' Nursery Experience

ILGENFRITZ NURSERIES, Inc.

The Monroe Nursery
MONROE, MICHIGAN

GET THE BEST

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TAXUS

is our specialty.
Bed stock—Liners
Finished—Specimen.

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EAGLE CREEK NURSERY CO., NEW AUGUSTA, IND.

Finest Quality
PERENNIALS and SHRUBS
Write for complete trade list.
KINGWOOD NURSERIES
MENTOR, O.

TWIN CITIES ELECTION

The December meeting of the Twin Cities Nurserymen's Association was held at the Hasty Tasty cafe, Minneapolis, Minn. An election of officers for 1957 resulted in the following roster: President, Ed Johnson, Rose Hill Nursery, St. Paul; vice-president, K. L. Zakariasen, Homedale Nursery, Hopkins; secretary-treasurer, James Weimelt, Nicolle Nursery, Minneapolis, and board members, William Elling, Elling Nursery, St. Paul, and the outgoing president, Russell Zakariasen, Homedale Nursery.

Members viewed colored slides of landscaping treatments peculiar to California that were taken during a convention trip to Los Angeles last July by Russell Zakariasen. Larry Bachman, Bachman's, Inc., Minneapolis, described some of the interesting aspects of his landscaping job on the new Southdale shopping center in South Minneapolis.

A discussion was held on the new nursery inspection law proposed by the state nursery inspection service. It was agreed that the association should support the new law and its revised schedule of rates which will be submitted to the state legislature in January.

The association was requested by several members of the arboretum committee, acting individually, to give the new arboretum project west of Minneapolis their support.

R. H. Z.

POSTAL address of the nursery owned by F. A. Zahler, Canton, O., has been changed to 4521 Fleetwood drive, northwest, Canton, O. The location of the nursery remains the same.

CO-OWNER of the new T. & J. Garden Center, Hicksville, N. Y., is Gasper J. Fazio, who has been a golf course greenskeeper and a nursery foreman on Long Island for many years.

NEWLY formed as a wholesale nursery is Humphrey-Callander, Inc., with 20 acres devoted to conifers and deciduous trees, at Decatur, Ill. Officers are M. C. Patterson, H. D. Clodfelter and L. D. Callander.

SHELL CHEMICAL CORP. is holding a nematology workshop January 16 and 17 at the Biltmore hotel, New York, N. Y. The conference will be staffed by leading nematologists from the United States Department of Agriculture and state agricultural experiment stations.

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PLANT NOTES HERE AND THERE

By C. W. Wood

Lamium Orvala Album

A question submitted by a Kentucky reader had me puzzled for quite a while and even now I am not sure that I am on the right track. He wrote about a white dead nettle which his father had years ago, requesting its name and a source of plants. After searching, all I find is the following brief mention in my notebook May 6, 1939:

"No dead nettle that I know is really exciting, yet most have some landscape value. Take *Lamium orvala album* for instance. Its pyramid of pale green, nettle leaves, to a height of two feet or more, makes a nice accent plant if it is not crowded, especially in summer when it is displaying its whitish, labiate tubes. Like other dead nettles, it is easy to satisfy and might become a bit of a nuisance in congenial soils and climates. Type *orvala* comes from southern Europe, which accounts for its slight tenderness to the cold of northern Michigan, and the white form which is under consideration here must be even more tender, for it failed to appear this spring."

I regret that I am unable to give a source of supply at this time. Actually I have not seen it since it was in this garden. I hope that the plant discussed here is the one the correspondent had in mind.

Anemone Obtusiloba

A Maryland friend of this column writes that he has a chance to get seeds of *Anemone obtusiloba patula* and wonders if it is worth trying. According to my experience with seeds of this plant, I am afraid that they would be a disappointment if they are purchased from commercial sources, as I shall point out later. First, though, let us examine the plant. What I shall say about it is largely hearsay, but it came from a thoroughly reliable source. A friend in England has sent me seeds of many rare plants during the past quarter of a century, as well as much information on new plants, and I can relay his account, I am sure, with the assurance that no one will be misinformed.

I never have seen the plant, three lots of seeds received here in the late 1930's having failed to produce a sprout. The reason they did not germinate, I have been told lately,

was that they must be planted before they are fully mature, i.e., in a green state, or they lose the power of germinating. That is a curious provision of nature, but it is true of a few plants that I know.

The plant is said to produce a ground-hugging tuft of deeply lobed, hairy leaves, which give it something of the appearance of the creeping buttercup. From that tuft emerge flower stems to a height of six or eight inches, bearing one or several inch-wide, blue flowers, varying somewhat in the shade of blue, but usually with a somewhat dull cast. It is also said to bloom more or less from spring until autumn, although the flowers are not always profusely produced.

Since writing the foregoing, I have referred to Farrer and find that he has the following to say about the type: "*A. obtusiloba* should be a

really delightful species from the temperate and alpine Himalaya, forming large tufts of smooth or hairy leaves, broad and round and unmercifully cut; from these rise up the stems, six inches to a foot high, each carrying, on pedicels of varying length, handsome blossoms of gold or white or purple." That applies, of course, to the type; variety *patula*, which was considered in the first part of the note, is as stated. It is probably just as well that my seeds did not germinate, because temperate Himalayan plants are seldom hardy here.

There is little encouragement in all this for our correspondent, or for other readers, I realize, but I thought that it might save disappointments in case seeds have reached or do reach commercial channels. If you are interested, however, and have access to a source of seeds, it might

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be worth trying, for one never knows how an adventure of this nature will develop.

Corydalis Bulbosa

There is another inquiry on the desk about *Corydalis bulbosa* which I shall answer now, not because it is timely, January being far from the planting time for these tuberous-rooted plants, but because the inquirer wants the information now. It is our hope that the note may interest other neighborhood nurserymen in a worthy garden subject, now rarely seen in this country.

Several tuberous-rooted kinds are mentioned in plant literature, but not many are readily available in America. *Corydalis bulbosa* (C. solida, of some authors) is the one most likely to appear in our lists, though it does not show up so frequently as it should. Its principal credit mark is its appearance so early in spring, a trait that is loved by all earnest gardeners, especially by us of the north, because we have been denied for months the pleasure of outdoor flowers. In northern Michigan it commences its display of rose-colored flowers soon after the passing of winter's snows, usually in early April here. Then it sends up frail stems to the height of four or five inches,

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bearing two finely divided leaves, which are no small part of the plant's charms, and at the top a cluster of flowers. These differ somewhat in color, varying from pale rose and pale lilac to deep rose and perhaps other shades that I have not observed. Anyway, there is a wide range of shades from which to choose.

The books state that it occurs naturally in rather open woodlands in its European home, and that gives

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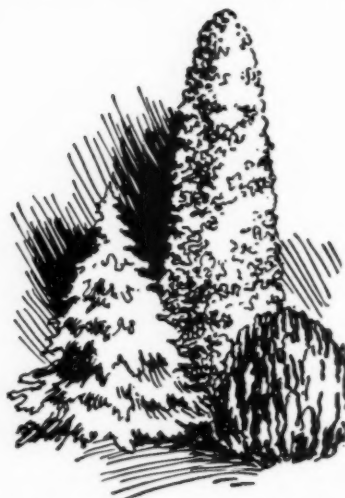
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us a clue to its treatment in the garden. In any event, my best results came when it was given a rather leafy soil in at least half shade. Its disconcerting habit of disappearing in June calls for careful placement, unless it is consigned to the wild garden, where decaying foliage and bare spots are expected. Propagation is from seeds (it self-sowed in my trials) and from offsets.

Anemonella Thalictroides

It has been on my mind for some time to do a little piece on one of my favorite wild flowers, the rue anemone, a much-named plant (more on that later) of eastern woodlands. A recent discussion with another wild flower enthusiast, who is also a good plant grower and a splendid merchandiser, has brought the matter to a head; so I shall try to combine his and my information in this note.

The plant is not obtrusively showy, so would no doubt be overlooked by gardeners who like gaudy furnishings in their landscape pictures, but it possesses grace in its thalictrum-like leaves (which probably account for one of its synonyms, *Thalictrum anemonoides*) and its anemone-like flowers (hence its now-accepted name, *Anemonella thalictroides*, I suppose) to a greater degree than almost any other native plant of its season. As a consequence of these charms, together with a long blooming period, during which it produces a succession of inch-wide, white flowers, and the ability to grow in shade, it can fill a need of most American gardeners. It has the disadvantage, of course, of disappearing in summer, but that trait, if taken into account in one's planning, merely adds to its value for planting among ferns and other "woodlanders" that are late risers. Actually, it is a plant of many uses in gardens where its desire for shade and a leafy soil can be fulfilled.

Its habit of producing clusters of tiny tubers furnishes a ready means of increase. These, taken up as soon as the plant goes to rest in summer, may be divided to individual tubers, reset in fresh soil and grown along for a year, when they should be ready to sell. It will be noticed when plants are dug that the tubers are near the surface; that gives one the clue that they should be reset in a similar manner, care being taken that the heavy rains of fall and winter do not leave the tubers exposed. To forestall that possibility, it might be well to top-dress them with coarse leaf mold before winter comes on.

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nomenclatural uncertainty and confusion about the plant, which may be of interest to some of our readers. Linnaeus started it off by calling the plant *Anemone thalictroides*; Michaux, recognizing the fact that it lacked some of the characteristics of a windflower, changed it to *Thalictrum anemonoides*, but neither name was truly descriptive of all qualities of the plant. Then, Hoffman-segg, in 1832, selected for it the Greek word *syndesmon*, or bound together, "because the plant unites characters of *thalictrum* and *anemone*." But he neglected to publish the name and description in the manner that the international rules specify, and the name was consequently held invalid by the powers that be. We read, though, that *syndesmon*, being tenable under American rules of nomenclature, has been adopted by some American authors. Be that as it may, *Anemonella thalictroides*, the name given the plant by Eduard Spach, in 1839, seems to be the one in general use, and that it is the way it stands now.

Viola Catherine Sharp

In answer to an Ohio reader's request for an appraisal of *Viola Catherine Sharp*, the following is submitted: The size of its flowers

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(about twice as large as those of Jersey Gem) is the first commanding feature of this most attractive plant. That alone should make it a good item for the neighborhood nursery, because large size of flower makes the cash register ring. Again, its pretty violet color does not detract a bit from its sales appeal. Its behavior in my trials almost 20 years ago has become rather dim in memory, but as it is remembered now it was satisfactory, showing hardiness to cold, amiableness in our trying sum-

mer heat, ability to produce flowers quite continuously and cutting qualities similar to those of Jersey Gem. It seemed to me then that the plant held much promise for the neighborhood grower. It must be grown from cuttings, of course, and that is easily done from early summer onward by nipping out the flower buds to induce basal breaks. These, taken when large enough to handle and inserted in the regular outdoor cutting frame, root with ease and may be transferred, when well-rooted, to

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Viola Floraire

To the inquirer who asked about Catherine Sharp and all others who are looking for a good bedding viola for the climate of the United States east of the Rockies, may I recommend *V. florariensis* (*V. floraire*) for trial. It has all the fine qualities of that excellent plant that we formerly grew as *V. papilio* (not our native *V. papilionacea*, but rather a form of *V. cornuta*), including an incredibly long period of flower production under the trying conditions of our eastern summers. The color is lavender-blue, similar to that of the old *V. papilio* and, like the latter, it is a compact grower, fitting it for several garden roles for which the loose growers like Catherine Sharp, Maggie Mott and Moseley's Perfection are not exactly suited.

Desmanthus

Most gardeners profess a love for the ferny foliage of the legumes, but maintain that many plants possessing that character have other traits which bar them from landscape use. That can scarcely be said against *Desmanthus illinoensis*, however, for it has about everything, except brilliant flowers, to its credit. Why, one might ask, is it not more often seen in gardens, then? And after giving the matter some attention, I am forced to the conclusion that gardeners do not know about the plant. Most of the genus is confined to the American subtropics, where some attain the form and stature of shrubs. Some reach the southern United States, and one, the subject of this sketch, grows as far north as Ohio and South Dakota. They are cousins of mimosa, the sensitive plant.

Our present plant has bipinnate leaves, made up of as many as 30 leaflets, giving it a graceful, ferny appearance. It makes an effective screen plant, its beautiful, lacy, dark green foliage being an excellent background for many of the stiff border subjects. It may grow to five feet in height and would then be an impressive sight, but that would take rich soil and perhaps warmer spring and summer weather than is normal in northern Michigan. Here it seldom reaches more than three feet, but even that makes it a highly desirable border plant. It comes readily from seeds and does well in any good soil in sun. It has received three or four names from botanists and may be found under *acuan* or *mimosa* as well as under *desmanthus*.

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All of our cuttings are rooted in soil. As soon as they root, they usually begin to make some new growth—often a great deal—and always begin to develop a hard, secondary root system. After a few months many are about equal to light bed-grown liners, although we continue to call them rooted cuttings.

So that you can judge what we are offering, we give the month in which the cuttings were rooted. That is, "RC June 56" would mean cuttings rooted during June, 1956, which have been growing in the soil in which they were rooted ever since. The amount of growth and the development of the root system will be in proportion to the time that has elapsed since they were rooted.

All plants go through our normally severe winters outside, so you can depend on receiving thoroughly hardened and dormant liners. However, spring does come early here. Some varieties will show activity by March 10 and nearly all begin some growth by the first of April, so please order early.

BG—bed-grown RC—rooted cutting
F—field-grown Mo., Yr.—date rooted
T—transplanted S—seedling

Berberis mentorensis—RC, July 56, 7c, 2-yr., F, 12 to 15 ins., 25c; 15 to 18 ins., 35c.

Berberis thunbergii, thornless—RC, April 56, 8c; BG, T, 6 to 9 ins., 15c.

CHAENOMELES (Flowering Quince) All on own root from softwood cuttings. No suckering from these plants:

Nivalls—The best of the white-flowering quinces. Large, pure white flowers borne in profusion. Good clean grower, vigorous and upright with few, if any, thorns and no fruit. RC, June 56, 10c. BG, liners, 6 to 12 ins., 18c; 12 to 18 ins., 21c; 18 to 24 ins., 30c; 2 to 3 ft., 50c.

Early Apple Blossom—C, light, clear, pink.

Juliet—C, light pink flowers.

Lagenaria Alba—AB, large, pure white.

Margaret Adams—BC, the best coral-pink.

Mt. Everest—ABC, white with just a touch of lavender and rose. Very vigorous and upright.

Pink Lady—BC, deep pink flowers.

Rosa Grandiflora—AB, pink, vigorous.

Rubra Grandiflora—C, red, vigorous, upright.

Ruby Glow—C, very deep and rich red.

Sanguinea—AB, bright red.

Snow—RC, large pure white flowers.

Stanford Red—BC, tomato-red.

Texas Scarlet—AB, compact, low plant, bright red flowers.

Vermilion—BC, vermilion-red.

Letters indicate sizes available. Any of the above—BG, liners, A, 12 to 18 ins., 30c; B, 18 to 24 ins., 45c; C, 2 to 3 ft., 60c.

These are the best, so far, of the more than 55 named varieties we have on test. Should be shipped before March 1. Simply heel in until planting time. Will keep perfectly.

Cherry Laurel—See *Prunus*.

Cydonia—See *Chaenomeles*.

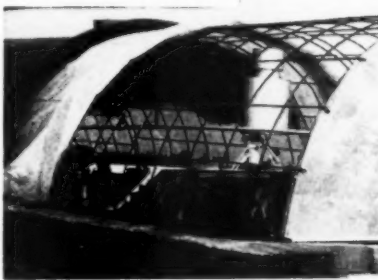
Euonymus alatus compactus—large, heavily rooted cuttings, rooted in soil since June, 1956, 8c.

Euonymus patens (*klautschoviensis*)—Large-leaved, T, F, 9 to 12 ins., liners, 15c.

Euonymus patens (*klautschoviensis*)—Small-leaved, usually called "carrierel" in the south, "radicans erecta" in the north, RC, Aug. 56, 6c; T, F, 12 to 15 ins., branched, liners, 15c; 12 to 15 ins., bushy, 25c.

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Laurocerasus—See *Prunus*.

Prunus laurocerasus schipkaensis (Laurel Cherry)—RC, July 56, 10c; BG, 6 to 9 ins., 20c; T, F, 8 to 12 ins., 30c.

Prunus laurocerasus zabeliana (Laurel Cherry)—RC, July 56, 10c; BG, 6 to 9 ins., 20c; T, F, 8 to 12 ins., 30c.

VIBURNUMS—All are on their own roots from softwood cuttings. The field transplants are pinched back several times a year to make well-branched plants. All transplant readily with complete success if dormant. They should be shipped by the first part of March and will keep perfectly if heeled in until planting time (the earlier the better).

Viburnum burkwoodi—RC, June 56, 10c; T, F, 9 to 12 ins., 25c; 12 to 15 ins., 40c.

Viburnum carlesii—RC, June 56, 15c.

Viburnum chenaultii—More shapely and attractive than burkwoodi, nearly evergreen, should soon supplant burkwoodi—RC, June 56, 12c; T, F, branched, 9 to 12 ins., 35c; 12 to 15 ins., 50c; 2-yr., field-grown, twice transplanted, 18 to 24 ins., \$1.35; 2 to 3 ft., \$1.85.

Viburnum juddii—Better than carlesii. A more compact plant with more attractive leaves, not subject to leaf spot.—RC, June 56, 15c; T, F, branched, 6 to 9 ins., 35c; 9 to 12 ins., 55c; 12 to 15 ins., 75c.

Viburnum rhytidophyllum—(Leather-leaved Viburnum), RC, June 56, 10c; BG, 6 to 9 ins., 17½c; T, F, not all branched, 9 to 12 ins., 25c; 12 to 15 ins., 35c.

Weigela vanichecki—BG, single cane, 18 to 30 ins., 17½c.

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ANTIBIOTIC CONTROLS

[Continued from page 10]

human medicine as either the broad spectrum antibiotics or as penicillin. Nowhere, either in the test tube or in the clinic, has it shown activity against fungi. These facts notwithstanding, Grosso in 1954 reported that streptomycin sulphate controlled blue mold of tobacco caused by the

fungal pathogen *Peronospora tabacina*. Zaumeyer and Wester extended this activity to downy mildew of Lima beans. These authors also showed that purified streptomycin is much less effective; hence, it is now assumed that the crude formulation contains small amounts of another antibiotic which is fungicidal.

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future of antibiotics in agriculture because most crude antibiotic preparations contain more than a single antibiotic and the chances of controlling plant diseases are thereby enhanced. Furthermore, it is less expensive to manufacture crude preparations.

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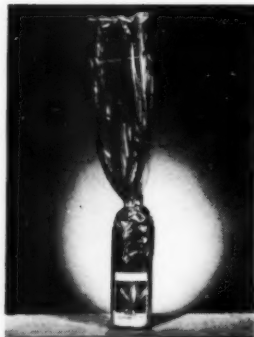
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	Each	Each
	Per	Per
	10	100
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America's favorite flowering tree. Deep pink, single flowers in spring.

6 to 12 ins., bare-root..	.60	.50
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About 6900 per bushel3.85

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PHYTOTEKTOR
Hwy. 41A WINCHESTER, TENN.

john, has been in use in controlling plant diseases for about six years. It is an antifungal antibiotic which proved too toxic for internal medicine and is quite toxic to plants, but it can be used at extremely low concentrations, one to two ppm, and hence is usable. Actidione has been widely used to control fungal diseases of turf, and under the trade name Actispray it is now coming into use for controlling the cherry leaf spot fungus, *Coccomyces hiemalis*. Actidione is compatible with several insecticide sprays such as nicotine, DDT, malathion and dieldrin, and it is poorly compatible with chlor-dane and calcium arsenate. It is inactivated by lime.

All five of these antibiotic formulations now on the market are soluble in water, are relatively stable at normal temperatures and are non-toxic to plants when used in the concentrations recommended by the manufacturers. The streptomycin-containing formulations are also compatible with the fungicides fer-mate, captan, phygen, and parathion and the insecticides lindane and dieldrin. They are incompatible with lime-sulphur and with pyrethrum and aldrin.

Since the era of Pasteur and Ehrlich, the problem of disease control in animals has centered in finding chemical agents which not only are highly toxic to disease-producing organisms and harmless to animals, but which also retain their antimicrobial activity when injected or absorbed into the blood stream. Antibiotics possess these qualities to a degree which was unheard of before their discovery, and it is because of their high in vivo activity that antibiotics have revolutionized human medicine.

In sharp contrast, plant pathologists have all but ignored the in vivo route in the control of plant diseases. Instead they have concentrated on "topical" agents applied as sprays and dusts. To a large degree plant diseases are, therefore, controlled by prevention of infection rather than by in vivo destruction of an established pathogen, and it is this limitation which probably accounts for the inability of conventional agents to control some plant diseases.

In antibiotics the plant pathologists have almost for the first time a group of agents which may be absorbed in quantity through the roots, stems and leaves or may be implanted in the stems or trunks and once inside may be translocated to other parts of the plant. Furthermore, by reason of the absence of an excretion system, antibiotic salts remain

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active systemically for considerably greater periods of time in plants than in animals, and it is also known that they tend to accumulate in some tissues.

It is, undoubtedly, to these unique qualities that antibiotics owe their spectacular success in controlling fire blight of pears and apples and cherry leaf spot. It may well be that the commercial growing of pears may once again become possible in the central and northeastern states as a result of these new systemic agents.

Scanty Published Data

In view of these known facts it is rather surprising that there is almost a complete dearth of publications reporting the systemic use of antibiotics in tree diseases. In 1949 Stoddard and Dimond, at the Connecticut agricultural experiment station, explored the systemic use of a number of unreported fungicidal antibiotics in elms, but all were violently toxic to the trees.

In the meantime an effective technique for procuring systemic distribution of a chemical agent in trees has been reported by Hanna. He used an insecticide (dimetox [bisdimethylamino fluorophosphine oxide]) systemically by an implantation technique in tree trunks to control the mealy bug vector of the cacao swollen shoot virus. The technique involved (1) boring holes with a pneumatic drill at the ground level at an angle of 45 degrees to a depth of 3.5 inches, (2) adding the several experimental dosages in liquid form, the dosages being percentages of the estimated weights of the trees, and (3) covering the openings with pliable, antiseptic wax. Mealy bugs were reduced from an average of 3,770 in untreated trees to an average of one at the highest dosage tried.

Oligomycin

Parenthetically may I say that the ink was hardly dry on these lines before I discovered through a telephone conversation with Dr. Zaumeyer that a cure for the most alarming tree disease of several decades, oak wilt, has appeared on the horizon using precisely this technique—implantation of tree trunks with a new antibiotic. The antibiotic is oligomycin, discovered in Dr. Elizabeth McCoy's laboratory at the University of Wisconsin, to whom I am indebted for permission to mention the following results obtained by Dr. Kuntz, of the Wisconsin group.

Oligomycin, along with three other new antibiotics, was implanted in four bore holes per 6-inch tree in a total of 40 trees per antibiotic treat-

ment. Oligomycin was added in 60 ml. portions per tree at a dosage of 20 and 40 micrograms per ml. All trees were inoculated with 16 billion spores per tree, which is apparently a 100-fold infective inoculum. All trees, except those treated with oligomycin, became heavily infected as demonstrated by reisolation of the fungus from the trees and by microscopic examination which revealed typical plugging of the vascular systems. No evidence of survival of the inoculum was found in the 40 trees receiving oligomycin at either dosage level, either in the midsummer or in the October examinations.

This result is all the more remarkable because oligomycin is a highly insoluble antibiotic and was implanted as a colloidal suspension; yet presence of the antibiotic was demonstrated in the crowns of the trees five days after treatment.

Another, and in some cases simpler, method for procuring high internal concentrations of antibiotics (at least with streptomycin sulphate) is by the addition of glycerin to the spray formulation. In the case of bean leaves, for example, addition of one per cent glycerin to the streptomycin spray increased absorption of the antibiotic by the leaves 5-fold in the

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<i>Juniperus glauca hetzi</i> , 1-yr., 6 to 12 ins.	12.00	100.00
<i>Juniperus horizontalis plumosa</i> , 1-yr., 6 to 12 ins.	12.00	100.00
<i>Juniperus sabina</i> (Savin Juniper), 1-yr., 6 to 12 ins.	10.00	85.00
<i>Juniperus sabina vonehron</i> , 1-yr., 6 to 12 ins.	10.00	85.00
<i>Juniperus squamata meyeri</i> , 2 1/2-in. pots	25.00	
<i>Cotoneaster divaricata</i> , 2-yr., field-grown, 12 to 18 ins.	15.00	120.00
<i>Euonymus patens</i> , 2-yr., field-grown, 8 to 12 ins.	15.00	120.00
<i>Hypericum hidcote</i> , 2 1/4-in. pots	12.00	
<i>Ilex cornuta burfordi</i> , 2 1/4-in. pots	17.50	150.00
<i>Ilex crenata convexa</i> , 2 1/4-in. pots	17.50	150.00
<i>Ilex crenata rotundifolia</i> , 2 1/4-in. pots	17.50	150.00
<i>Jasminum floridum</i> , 2-yr., field-grown, 8 to 12 ins.	17.50	
<i>Jasminum nudiflorum</i> , 3-yr., field-grown, 12 to 18 ins.	15.00	125.00
<i>Lonicera heckrotti</i> , 3-yr., field-grown, 18 to 24 ins.	25.00	
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2-yr., 2 to 3 ft., 2-yr., 18 to 24 ins.,	15.00 12.00	140.00 110.00
<i>Weigela hendersoni</i> 1-yr., 12 to 18 ins.,	4.00	35.00
<i>Weigela rosea</i> , 2-yr., 2 to 3 ft., 4 canes and up.....	15.00	.....
<i>Weigela Lutea Yellow</i> 2-yr., 18 to 24 ins.,	3.50	30.00
<i>Forsythia fortunei</i> 2-yr., T., 3 canes, 2 to 3 ft.,	15.00	.....
<i>Pink Dogwood</i> 2-yr., 5 ft. and up..... 2-yr., 4 to 5 ft., 2-yr., 3 to 4 ft.,	\$2.50 2.00 1.50	\$225.00 175.00 125.00
<i>Philadelphus grandiflorus</i> 2-yr., 18 to 24 ins., br. \$	4.00	\$35.00
<i>North Privet</i> 2-yr., 18 to 24 ins., 3 br. and up..... In 100,000 lots.....	4.00	35.00 27.50
<i>White Dogwood</i> 2-yr., T., 24 to 30 ins., br., 2-yr., S., 24 to 30 ins., 2-yr., S., 18 to 24 ins.,	40.00 15.00 10.00	.....
<i>Lonicera rubra</i> 2-yr., 24 to 30 ins., br., 2-yr., 18 to 24 ins., br.,	4.00 3.00	.....
<i>Silver Maple</i> 3-yr., 8 to 10 ft.,	100.00	.....
<i>Lombardy Poplar</i> 1-yr., 12 to 18 ins., 1-yr., 18 to 24 ins., 1-yr., 2 to 3 ft.,	1.50 2.00 3.00	.....
<i>Pussy Willow</i> , 2-yr., cutting-grown 2 to 3 ft., 3 to 4 ft., 4 to 5 ft.,	8.00 12.00 16.00	.....
<i>Pussy Willow</i> , 1-yr., 6 to 12 ins., 12 to 18 ins., 18 to 24 ins.,	3.00 4.00 4.00	25.00 35.00 40.00

FAULKNER SPRINGS NURSERY

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first six hours of 23.6-fold by 96 hours. The rapidity with which antibiotics may be absorbed into the leaf tissue is also pointed up by the fact that Acti-dione is absorbed into leaf tissue so rapidly that a rain occurring one hour after spraying will not interfere with the control of the cherry leaf spot fungus.

Two other newly explored uses of antibiotics in controlling plant diseases eventually may have many direct applications in nursery practice.

Damping-Off Control

The first is the prevention of damping-off caused by species of pythium in nursery beds. Damping-off, as you know, is one of the nurseryman's greatest problems, and an effective preventive is urgently needed. The antibiotic formulations now on the market are not effective, largely because they do not long retain their activity when added to soil.

Recently, however, oligomycin, which was mentioned in connection with oak wilt, has been found to remain unchanged in soil for at least three weeks and to be absorbed and concentrated in plant roots. It gave complete protection against damping-off when added to alfalfa seed-bed waterings.

The second development is the treatment of seeds, tubers and cuttings with antibiotics prior to planting. Soaking potato seed pieces in any of the streptomycin-containing formulations for 30 minutes before planting practically eliminates development of blackleg and soft rot caused by species of *erwinia*. The recently reported antibiotic fungicide, Filipin, when used as a seed dust gave complete protection of spinach and cucumber seedlings against pre-emergence damping-off caused by rhizoctonia sp. Thomas has also controlled bacterial leaf spot of sesame caused by *Pseudomonas* sesame by soaking the seed in Agri-mycin for 30 minutes before field planting. Similarly, bacterial wilt of chrysanthemum cuttings caused by *Erwinia chrysanthemi* is controlled by soaking cuttings in commercial streptomycin formulations.

I am afraid that by now I have clearly revealed to you my incapacity for talking about the possible potential role of antibiotics in controlling disease in the plant kingdom in the detached and guarded terms of the pure scientist. My optimism about the future of these agents is enormous. Nevertheless, a large body of facts must still be obtained before nurserymen can turn to antibiotics with as much confidence of disease control as you now turn to the old

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We offer a dependable source of supply for resale or planting stock. Plants ready for shipment October 15 to June 1. Dormant stock can be furnished for late spring shipment if desired. Varieties starred (*) are from virus-free mother stock and all varieties have been treated and sprayed for elimination of insects, nematodes and virus carriers. All stock double inspected for Red Stele. Prices below are for 1900 plants, packed 25 to bundle, each bundle labeled true to name. No charge for packing. Prices are F.O.B. Farmington, Ia.

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standbys, lime-sulphur, Black-leaf 40 and Bordeaux mixture, and to some of the newer organics.

Enlarged Group Seen

The time is not too far distant, however, before you will possess a larger armamentarium of antibiotics and detailed knowledge of how to apply these antibiotics in controlling many tree diseases. Almost all of the antibiotic manufacturers and many universities and experiment stations, for example, are today including, in their searches for new antibiotics, techniques for picking out those which may be especially useful in agriculture. These programs are turning up dozens of new antibiotics each year which appear to have special qualifications for use in controlling plant diseases. No longer does the production of a new antibiotic in quantity prevent extensive field testing because of initial manufacturing costs which may run into thousands of dollars per pound. The large antibiotic manufacturers are usually willing to bear these initial costs because they know from abundant experience that eventually manufacturing costs can be reduced to practical levels, if the volume of antibiotic required reaches a few dozen or hundred tons per year. The agricultural market is obviously a tonnage market.

These same companies are also building up large field testing facilities of their own. In addition, some 50 plant pathologists in dozens of state and federal experiment stations are actively and increasingly engaged in field testing new and old antibiotics on agricultural crops.

Viruses Still Resist

It is difficult for those of us who have been engaged in searching for and in developing and manufacturing antibiotics since the early days of penicillin in the last war to imagine that the picture in plants will be entirely dissimilar to that in animals. All of the evidence now available supports this view, and the true viruses represent the only large group of disease agents which still resist all efforts at control with antibiotics. Somewhere in the soils of the world, among the approximately 30 per cent of all organisms which have been found to produce antibiotics when grown in the test tube, agents should eventually be found which are capable of destroying under in vivo conditions almost every disease organism which attacks animals or plants. It may be a century-long search, but when it is completed, we shall truly have entered the antibiotic era.

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CALIFORNIA ASSOCIATION OF NURSERYMEN

ELMER J. MERZ, Executive Secretary
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CHRISTMAS MEXICANA

Four chapters of the California Association of Nurserymen sponsored a delightful Christmas party at the Statler hotel, Los Angeles, Calif., December 12.

Nearly 800 members and employees, representing the Inland Empire, Los Angeles, Sunset, and San Francisco chapters, met in the Pacific ballroom of the Statler hotel for a dinner dance and Christmas party—Mexican style.

Norman Springer, of Los Angeles chapter, was the chairman of this first combined southern chapters C. A. N. affair that was a huge success. He was assisted by Waldo and Lorraine Small, of Inland chapter; Peter Mordigan, of San Fernando chapter; James Gibbs, of Sunset chapter; and Connie Meadows and Art Cox, of Los Angeles chapter, each in charge of a committee.

Following the delicious Mexican-style chicken dinner, guests enjoyed a floor show of Spanish classical and folk dances, music and humor. Six lucky people won valued door prizes awarded just before Paul Martin's orchestra took over the bandstand for the evening of dancing. Door prizes and entertainment were made possible through the generous contributions of 48 suppliers of the southern California area. D. C.

SUPERIOR CHAPTER

The December meeting of the Superior chapter of the California Association of Nurserymen was devoted to the annual Christmas party, held this year at the Lanai restaurant, Sacramento. A total of 123 persons were present, and it was a most successful affair. Suppliers donated door prizes, which consisted of two television sets, three radios and several other lovely gifts.

Mrs. Betty Fawcett, of Oki Nursery, Perkins, was Santa Claus. The master of ceremonies was Lee Davison, of the Pacific Guano Co., Berkeley, assisted by Elmer Merz, C. A. N. executive secretary.

At the December board of directors' meeting, it was decided to help the Union newspaper to establish a better gardening page in the Sunday edition, in an effort to make adver-

tising dollars go further. The cooperation of the newspaper toward this end is promised. The board also passed on the support to be given to the retarded children's home in Sacramento, namely, to supply all materials necessary for landscaping, free of charge. Jack A. Wick, Sec'y.

CALIFORNIA ARBORISTS

The California Arborists Association held a short meeting December 19 at the offices of the department of agriculture at Redwood City. The purpose was to elect officers for the coming year, to hear reports of the secretary and the treasurer and to discuss procedures in cases of malpractice on the part of tree surgeons.

Officers elected were as follows: President, George Hood, Palo Alto, (re-elected); vice-president, John Davis, Davis Tree Surgeon, Menlo Park, and secretary-treasurer, Philip

Parsons, Bay Pest Control, San Mateo. The executive committee for 1957 will be composed of the officers and Frank Nolan, Palo Alto; Millard Blair, Mount View, and Leslie Mayne, San Mateo.

Malpractice

In the matter of malpractice, pictures were shown of a tree surgery job which, it was thought by the owner, not only did not enhance the trees' appearance but actually ruined them as a decorative feature in the landscape. The owner of the property on which the trees under discussion are growing indicated that he paid about \$1,500 more for the land because of the trees and that the surgeon who did the work on the trees assured him his treatment would improve the appearance of the trees and increase their probable life span.

Members who viewed the trees and who took the pictures, as well as those who saw the pictures at the meeting, agreed that the work, not by a member of the association, did not do much for the trees. The owner threatens suit, but it is questionable if damages can be collected under the circumstances. The membership felt that it has a duty to advise the public who the better and more reliable tree surgeons are and to try to



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set up a standard of ethics for such work. How to proceed was a topic of considerable discussion.

Trash Problem

Also under discussion was the need for action on trash disposal. As smog becomes a more serious menace in the Bay area, the burning of trash in private incinerators as well as public dumps becomes more and more restrained. Formerly tree prunings could be disposed of in the dump nearest the place where the work was done. A few years ago most communities barred the city dumps to nonresidents, regardless of the origin of the trash. The tree surgeons then were required to carry the trash a number of miles, in many cases to the dump of the city in which they lived. Now the burning of trash is being barred at all dumps, and the tree men are fast finding it impossible to dispose of the trash under any circumstances.

W. B. B.

CALIFORNIA NOTES

In an experimental orchard under the direction of the United States Department of Agriculture at Chico there are indications that pistachio nuts may have commercial prospects in California. It is said that the nut is well adapted to areas where almonds and olives are grown. The Chico planting is 17 years old. Ornamental nurserymen who have been watching the project are considering propagation of the tree for home uses.

Trying to check the spread of the walnut husk fly in California, the state department of agriculture has placed a quarantine on the movement of walnuts from the Sonoma valley in northern California and all of the southern part of the state. The quarantine applies to unhusked nuts, hulls and hull fragments and a variety of containers and equipment, which may move into the areas only after fumigation. The husk fly, long a pest of the southern growers, has contributed much to the northward migration of the walnut industry.

In the state of Washington an injunction is being sought to prevent cloud seeding.

It is estimated that about 2,000,000 acres of orchard land have been almost ruined and that another 2,000,000 are approaching serious difficulties due to soil compaction by the heavy equipment used in orchard spraying, cultivation, harvesting and other practices. The University of California is undertaking some studies on the subject.

John E. Spurlock, who has been



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Quality Stock

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FRUIT TREES
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VINES AND BULBS
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Birch, Cut-leaved Weeping, 10 to 12 ft.,
9 to 10 ft., 8 to 9 ft.
Birch, Clump, 7 to 8 ft., 6 to 7 ft.
Birch, European White, all sizes.
Box Elder, Green, all sizes.
Elm, Chinese, 10 to 12 ft., 8 to 10 ft.
Elm, American, 8 to 10 ft., 6 to 8 ft.,
5 to 6 ft., 4 to 5 ft.
Hawthorn, Paul's Scarlet, 6 to 7 ft.,
5 to 6 ft., 4 to 5 ft., 3 to 4 ft.
Hawthorn, Paul's Scarlet, whips, also
available.
Honey Locust, Thornless, 5 to 6 ft., 4 to
5 ft.
Maple, Faassens Black, 6 to 8 ft., br.
Maple, Faassens Black, whips, 5 to 7 ft.,
5 to 6 ft., 4 to 5 ft., 3 to 4 ft., 2 to
3 ft.
Maple, Norway, br., 10 to 12 ft., 8 to
10 ft., 6 to 8 ft.

Maple, Red, 8 to 10 ft., 6 to 8 ft., 5 to
6 ft., 4 to 5 ft., 3 to 4 ft.
Maple, Silver Var., br., 8 to 10 ft., 6 to
8 ft., 5 to 6 ft., 4 to 5 ft.
Maple, Silver Var., whips, 7 to 8 ft., 6
to 7 ft., 5 to 6 ft., 4 to 5 ft.
Maple, Schwedler, br., 10 to 12 ft., 8 to
10 ft., 6 to 8 ft.
Maple, Schwedler, whips, 7 to 8 ft., 6 to
7 ft., 5 to 6 ft.
Maple, Silver, 6 to 8 ft., 5 to 6 ft., 4 to
5 ft.
Oak, Pin, 10 to 12 ft., 9 to 10 ft., 8 to
9 ft.
Oak, Red, 4 to 5 ft., 3 to 4 ft.
Oak, Scarlet, 6 to 8 ft., 5 to 6 ft., 4 to
5 ft., 3 to 4 ft.
Redbud, 4 to 5 ft., 3 to 4 ft.
Poplar, Lombardy, 8 to 10 ft., 6 to 8 ft.
Willow, Babylonica, 8 to 10 ft., 6 to 8 ft.
Willow, Golden Niobe, 8 to 10 ft., 6 to
8 ft.

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Economy Plastic Labels
Rite-in-the-Rain Waterproof Tagboard Labels
Wood Tree and Pot Labels
Inexpensive Non-Waterproof Tagboard Labels
All labels available printed.

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W. P. "Pete" Nuffer in charge

WOODWARD GLOBE ARBORVITAE

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15 to 18 ins., B&B 1.25
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Less 25c per plant packed bare-root in sphagnum moss.

English Holly, rooted cuttings in plant bands, \$25.00 per 100.

Full line of finished and lining-out stock. Write for special price
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DOERFLERS have five solid acres of
True Dwarf Buxus and Buxus Sempervirens,
perfectly sheared to globe, pyra-
mid and column, up to 7 ft.

DOERFLERS specialize in large shade,
flowering and ornamental trees—also
rare and dwarf stock, all completely
root-pruned and moved regularly, there-
fore can be planted the year around.

One of the leaders in canned stock
as well as field-grown.

F. A. DOERFLER & SONS
250 N. Lancaster Dr.
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Patented and Nonpatented.

Finest in roses since 1935.

Write for new list and prices. Contracts
and advance orders solicited.

PACIFIC NORTHWEST ROSE NURSERY
P. O. Box 261 GRESHAM, ORE.

DOTY & DOERNER, Inc.

6691 S. W. CAPITOL HIGHWAY
PORTLAND 19, OREGON

WHOLESALE

GENERAL NURSERY STOCK

farm adviser in Sacramento county
for 28 years, has been appointed as-
sistant state supervisor of extension
at the Davis campus. He will be re-
placed by Victor Osterli, who has
been state extension specialist.

In spite of the nearly disastrous
year the strawberry growers went
through in 1956, the crop reporting
board of the U. S. D. A. says that
the acreage for harvest in the coming
year will be about 4 per cent greater
than last year's.

After the San Mateo county board
of supervisors removed the ban on
billboards along the county's free-
ways, the planning commission voted
that the state take immediate steps
to landscape the Bayshore highway.
Billboards are automatically barred
from freeways within one year after
they are officially landscaped.

Sunnyvale's city manager, H. K.
Hunter, is asking the Pacific Gas
& Electric Co. to pay a \$4,000 sub-
sidy for the planting of native shrubs
and trees in a 180-foot strip under
its power lines in Sunnyvale. The
area would be used as an arboretum,
according to the city council's plans,
and the city would pay for the care
of plantings.

Growers of choose-and-cut Christ-
mas trees in the Santa Cruz area sold
practically all the salable trees long
before the lots in the towns even be-
gan to make sales last month. The
growing of these trees on submarginal
land in Santa Cruz county has
been a project sponsored by the Uni-
versity of California extension ser-
vice under the direction of farm ad-
viser Ed Koch and is proving to be
very successful.

Landowners, including at least
two wholesale ornamental plant
growers, are concerned over a recent
plan of the navy to buy large tracts
of land under the flight-approach
pattern at the U. S. naval base at
Moffett field, near Sunnyvale. The
land would be left entirely idle and
its use would be for the protection of
possible workers or residents in case
of plane crashes. The land is highly
productive and so located as to be
desirable for residential, light in-
dustry or agricultural purposes. The
prices offered by the navy are said to
be ruinously low and now a com-
promise has been suggested whereby
the landowners would sell building
rights to the land and thus be allowed
to use it for agricultural purposes.

Peters & Wilson, Millbrae, adver-
tised widely for Christmas. They
suggested such items as pruning
shears, plant ties and gloves for
stocking stuffers and gift certificates
for larger and more costly items.

The United States horticultural

Forget to Order Bare-root Roses?

Don't Rave and Rant —

RELAX!



Call or wire your last-minute orders
for Bushes and Climbers

Take advantage of Eastern Pool
Cars Now Moving —



WEEKS WHOLESALE ROSE GROWER

O. L. WEEKS

926 W. ELY

ONTARIO, CALIF.



farm at Fresno announces that it has budwood of several newly developed peach varieties which show promise for various parts of the state.

Worth Brown, Brown Bulb Co., Capitola, presented the announcer on the Green Thumb TV program a hand-painted tie on which a green thumb was prominent. The tie was to have been worn at the program's first color presentation, but technical difficulties prevented the color's showing on the day scheduled.

W. B. B.

JOE KLUPENGER, Klupenger Nursery, Portland, Ore., was recently appointed region VI representative on the market development and publicity committee of the American Association of Nurserymen by Clyde Stocking, association president. Ray Klupenger of the firm recently underwent surgery, but is now all right.

DEVELOPING and building a 9-acre shopping center on one corner of their nursery property, Angelo and Piero Balzarini, owners of Five Corners Nurseries & Garden Store, Seattle, Wash., will move the nursery proper to make room for future expansion of shopping and parking facilities. They will occupy one of the stores in the new center.

PACIFIC COAST NURSERY

Rt. 1, Box 114B, PORTLAND 9, ORE.

**Pioneering Seedling Growers on
the Pacific Coast Since 1914**

**Specializing in Fruit Tree Seedlings
also Shade and Flowering Trees**

French Apple Seedlings,
Str. and Br.
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Combination carloads to eastern distributing points.

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For complete customer satisfaction sell Select-grown container stock.

We specialize in container-grown trees and ornamentals.

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ORDER FROM RICH!

Flowering Crab Apples, many varieties

Flowering Cherries

Flowering Plums

Norway Maples, branched, all grades

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Fruit Trees

And Many Other Items

Write for our wholesale list.

RICH & SONS NURSERY
HILLSBORO, ORE.

TREE PEONIES

We are distributors for Yamato Noen's choice tree peonies.

No nursery complete without them. Send for list of names and prices.

**LAKE SAMMAMISH
EVERGREEN NURSERY**

Rt. 1, Box 79
EAST STANWOOD, WASH.

PLANT PATENTS

The following plant patents were issued recently, according to Rummeler, Rummeler & Snow, Chicago patent attorneys:

No. 1527. Rose plant. Thomas Edison Motose, Fairport, N. Y. A new and distinct variety of rose plant, characterized as to novelty by its thornless canes and branches; by its carmine and related colored blooms; by the unusual form of its flower, which may be described in its early stage of bloom as an attractive loose ball of petals resting on five or more large, outer, fully unfurled petals radiating from the base of said ball; by its abundant production of flowers with stiff narrow stems, and by its dark, leathery leaves, with small, simple serrations.

No. 1526. Almond tree. Leslie M. Thompson, Clovis, Calif. A new and distinct variety of almond tree, characterized particularly as to novelty by its late blooming so as to avoid damage by late frost, its blooming period being substantially later than that of the Texas and Nonpareil; by its general similarity to the Nonpareil in tree appearance and growing habits, and by its markedly heavier more regular bearing than the Texas and Nonpareil.

No. 1528. Rose plant. Paul B. Begonia, San Jose, Calif., assignor to Germain's, Inc., Los Angeles, a corporation of California. A new and distinct variety of rose plant of the climbing hybrid tea class, characterized particularly as to novelty by being substantially identical with its parent variety, Chrysler Imperial (plant patent No. 1167), but essentially being distinguished therefrom by its vigorous and climbing habit of growth.

No. 1529. Rose plant. Eugene S. Boerner, Newark, N. Y., assignor, by mesne assignments, to C. W. Stuart & Co., Newark, N. Y., a corporation of New York. A new and distinct variety of rose plant of the everblooming large-flowered climber class, characterized particularly as to novelty by its continuity of bloom, its habit of bearing flowers in large clusters on long and vigorous stems, the semi-double form of its flowers in which the central petals are recurved and hide the stamens and pistils thereby giving the flowers a double appearance and the distinctive Tyrian Rose general color tonality of the flowers, which does not fade, even in hot weather, until the petals fall.

No. 1530. Rose plant. Louis Lens, Wavre-Notre-Dame, Belgium, assignor to Jackson & Perkins Co., Newark, N. Y., a corporation of New York. A new and distinct variety of rose plant of the hybrid tea class, characterized particularly as to novelty by its upright and firm growth, its stiff-petaled flowers, its floriferousness and suitability for both cut flower and outdoor use and the distinctive white color of its flowers.

No. 1531. Rose plant. Robert V. Lindquist, Hemet, Calif., assignor to Hemet Wholesale, Hemet. A new and distinct variety of rose plant of the climbing hybrid polyantha class, characterized particularly as to novelty by being generally similar to its parent variety Eutin (unpatented) but being essentially distin-

A. MCGILL & SON FAIRVIEW, ORE.

Wholesale only

**FRUIT TREE SEEDLINGS
FLOWERING ORNAMENTAL TREES
SHADE TREES**

**Constant Vigilance Results
in Quality Stock**

Combination carloads to eastern
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Eastern Representative:

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ROSES OLD and NEW

Fine-quality, two-year plants, budded on Multiflora, in over 250 varieties. Shipping early fall and on.

Also offering 150,000 extra-heavy, uniform, 3-year roses, in both patented and nonpatented varieties (at slightly higher prices).

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GRESHAM, ORE.

TREES FOR AMERICAN GARDENS

By Dr. Donald Wyman

Presents 745 recommended trees, giving botanical and common names, showing hardiness zones and maturity height. Describes desirable varieties. Discusses hardiness, bloom, ornamental fruit, foliage colors and trees for various purposes. Colored maps show hardiness zones. Secondary list of 1,500 species and varieties. 376 pages. (1951).

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AMERICAN NURSERYMAN

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ROSES

Top-quality, field-grown patented and standard roses.

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guished therefrom by its vigorous and climbing habit of growth and its habit of producing flowers in smaller clusters and on shorter stems than those of said parent variety.

No. 1532. Pecan tree and nut. Fred A. Mahan, Monticello, Fla. A new variety of pecan tree, being crossbred from the Mahan and Stuart varieties, said tree being rapid in growth, vigorous, having leaves large and rather pointed and having a bark with prominent markings and limbs which produce buds which are rather sharply pointed at their apex and whose blooms appear a week earlier than the Stuart and whose nuts mature about 10 days earlier in the fall than the Stuart variety; and its nuts averaging about one and one-fourth inches in diameter and about four inches around and having a length of about two to two and one-fourth inches, the nuts being ovate shaped with a pointed apex at one end and a plump rounded portion at the other end, the kernel being better flavored than the Mahan or Stuart variety and having a moderately high percentage of oil, plump and relatively thick and easily separable from the shell, the shell thereof being of medium-brown color, with black markings prominent at the apex end of the shell, said shell being medium thin with striations running longitudinally of the nut.

No. 1533. Rose Plant. Gerrit de Ruijter, Hazerswoude, Netherlands, assignor to the Conard-Pyle Co., West Grove, Pa., a corporation of Pennsylvania. A new and distinct variety of rose plant of the hybrid polyantha class, characterized particularly as to novelty by the combination of its vigorous and good habits of growth, the abundance, constancy, exceptionally large size and unusually outstanding sweet fragrance of its flowers, the excellent form and unusually heavy substance of its flowers, and the distinctive progressive color change and complete harmony of the colors at all stages of the flowers as they open and mature, with an attendant and unusual increase in color intensity.

WELCOMED into the 100 Year Club of California at the state fair was the Ferry-Morse Seed Co. Gov. Goodwin J. Knight presented the firm with an honorary award.

OPENING of Tanner's Garden Shop in the new Perris Valley shopping center, Riverside, Calif., is announced by Mr. and Mrs. Albert Tanner, of Tanner's Nursery, Perris, Calif.

WALTER REUBOLD has sold his Sunset Seed & Nursery Co., San Francisco, Calif., to his former assistant, Marvin Buck, a graduate in agriculture of the University of California, who has been with the nursery for the past 12 years.

FORMAL opening was held recently at Vincent's Garden Center, Upland, Calif., by the operators, Mr. and Mrs. Vincent Vernaci. The center, which has been in business several months, will specialize in the production of camellias, azaleas and gardenias.

For Quick Sale Now . . .

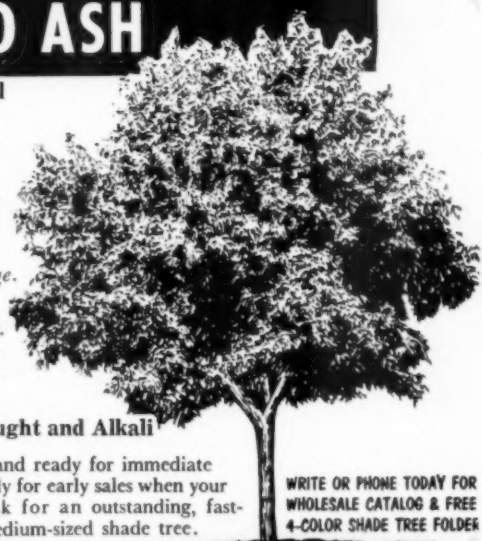
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MODESTO ASH

Straight and Tall
35-40 feet.
Beautiful Shape
Round-headed
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Exceptionally Clean
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Spectacular in Fall
Bright golden foliage.
Tap Root System
Ideal for parkways.
Thrives Anywhere
Hardy to minus
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Resistant to Drought and Alkali

Yes, they're dug and ready for immediate delivery. Be ready for early sales when your customers ask for an outstanding, fast-growing, medium-sized shade tree.

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WHOLESALE CATALOG & FREE
4-COLOR SHADE TREE FOLDER



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Merced, California
--- One of California's Leading Nurseries

MILTON NURSERY CO.

79th Year

MILTON-FREEWATER, ORE.

Flowering, Ornamental Shade
Trees, Evergreens and Shrubs

Fruit Tree Seedlings

Apple, Pear, Mahaleb, Mazzard
and Myrobalan.

Specialties

Moraine Locust (Pat. No. 836)
Crimson Beauty Flowering Quince
(Our own introduction)

Combination carlots for eastern distrib-
uting points during shipping season.

CUTTING-GROWN
RHODODENDRON LINERS

Hardy and semihardy varieties,
Quality only

VAN VEEN NURSERY

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SEEDS

Collectors of Tree, Shrub and
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E. C. MORAN, Stanford, Mont.

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CHOICE YAKIMA VALLEY GROWN
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Fruit Tree Seedlings

Fruit Trees

Roses

Shade and Ornamental Trees

Deciduous Shrubs
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General Ornamental Stock

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Minimum order, \$4.00.

Instructions for the February 1 issue must be received by Friday, January 11.

Forms for February 15 issue will close Friday, January 25.

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AZALEAS
CASH AND CARRY ONLY, NO DELIVERY.
OVER 80,000
SIZES RANGING FROM 4 ins. to 8 ft.
(Not all sizes in all varieties.)
Lath house and field-grown.
Quality, priced right.
(Prices available on request.)

INDICA
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SNOW PINK PEARL
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CHRISTMAS CHEER HINO-CRIMSON
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AZALEAS, ROOTED CUTTINGS
\$6.00 per 100, \$50.00 per 1000.
Hinodégiri, Hino-Crimson, Coral Bells, Corage, Fedora, Christmas Cheer, Montrose, Flame, Addy Wery, Mayfair, Sherwood Orchid, Sherwood Red, Rosebud, ledifolia alba, Salmon Beauty, Royalty, Boudoir, Pink Pearl, amoena, Red Progress, Snow.
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Norman Ave., Riverside Park, Riverside, N. J.
Phone Belmont 5-2210

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Large assortment of Kurume, Glenn Dale and other evergreen Azalea and Broadleaf Evergreen liners for spring.

Also some specimen stock left unsold in Hinodégiri, Snow, etc. Send for new spring list.

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AZALEAS
Choice plants, bed-grown, irrigated, compact and well shaped. The growing of fine Azaleas is our business, not a sideline. Send for our list today.

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AZALEA LINERS
DELIVERY SPRING, 1957.
Hinodégiri, in flats.
60 plants to the flat.
\$14.00 per 100, \$125.00 per 1000.
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FOR NOW AND SPRING DELIVERY
Field-grown hinodégiri, Hino-Crimson, Hexe, Coral Bells. Thousands of all sizes.
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Write for list of varieties, sizes and prices.
LEVICK NURSERY CO.
R. D. 2 Bridgeton, N. J.

More customers for you!
Over 8,000 subscribers, all active buyers.
see your ad in the American Nurseryman.

BARBERIES

RED-LEAVED BARBERRY
(Atropurpurea) 2-yr. seedlings.
Per 100 Per 1000
Lining-out \$ 4.50 \$ 40.00
6 to 9 ins., branched 6.00 50.00
9 to 12 ins., branched 9.00 80.00
12 to 18 ins., branched 12.00 110.00
18 to 24 ins., branched 16.00 140.00
RED-LEAVED BARBERRY
(Atropurpurea) 4-yr. transplants
Heavy stock. Per 100 Per 1000
9 to 12 ins. \$24.00 \$200.00
12 to 18 ins. 32.00 240.00
18 to 24 ins. 32.00 230.00
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(Thunbergii) 4-yr. transplants.
Per 100 Per 1000
9 to 12 ins. \$20.00 \$160.00
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BERRY PLANTS

ORDER NOW
NEW BURGUNDY RASPBERRY, transplants and 1-yr. tips.
Black Raspberry, transplants and 1-yr. tips; Dundee, Logan, Cumberland, Bristol and Shuttlesworth.
Red Raspberry, transplants and 3/16-in. and up; Chief, Newburgh, Sunrise and Taylor.
Purple Raspberry, transplants and 1-yr. tips; Sodus and Webster.

GRAPE VINES
Concord, Calco, Catawba, Niagara, Fredonia, 2-yr. No. 1.
Concord, Calco, Catawba, Niagara, Portland, Sheridan, Fredonia, Delaware, 1-yr. No. 1.

Write for price list.
LORETTO BROS. FRUIT & NURSERY FARMS
Box 57 North Collins, N. Y.

STRAWBERRY
Illinois-grown
Blakemore \$ 7.50 per 1000
Senator Dunlap 7.50 per 1000
Tennessee Beauty 7.50 per 1000
Armour 8.50 per 1000
Robinson 8.50 per 1000
British Sovereign 11.00 per 1000
Gem (Everbearing) 12.50 per 1000
Superfection (Everbearing) 12.50 per 1000
ANNA NURSERY
Anna, Ill.

ROYAL SEEDLESS GRAPE
(Former new Great Northern seedless blue Grape.) Nearly as large as Concord, but much sweeter, harder and heavier bearing. Just as vigorous and healthy. Ripens with Moore's Early, 15 years under test. As hardy as Beta, 2-yr. No. 1, 3 for \$6.00 cash. Plants that die replaced free if reported by August 1.
SCHWAB FRUIT FARM & NURSERY
220 N. 5th St. Mankato, Minn.

NEW YELLOW RASPBERRY
Goldenwest, a new introduction from the western Washington Experimental Station. Vigorous grower, heavy yielder, firm, long cap, sweet, mild flavor.
1-yr., No. 1 \$7.20 \$63.00
1-yr., No. 2 5.00 45.00
Free packing. Cash with order, please.

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R. 2, Box 39 Olympia, Wash.
SCHWAB GOOSEBERRIES, large as Plums.
New seedling (world's largest Gooseberry). Berries often 1 1/2-in. in dia.; highest quality, hardy, very productive, very sweet. Wholesale, 1-yr., heavy, \$4.50 per 100; 2-yr., light, \$6.00 per 100; bearing size, \$7.50 per 100, 3 per cent discount for cash or free baling. Plants that die replaced at half price.
SCHWAB FRUIT FARM & NURSERY
220 N. 5th St. Mankato, Minn.

STRAWBERRY PLANTS
Blakemore, Missionary, Florida 90, Klondyke and Robinson, \$8.00 per 1000. Tennessee Beauty, Tennessee Shipper, Dixieland and Premier, \$10.00 per 1000. Peachontas, \$12.50 per 1000. Virus-free foundation stock.
MULLINS PLANT FARMS
410 Brookfield Ave. Chattanooga, Tenn.

RASPBERRY PLANTS
The new Durham Everbearing red Raspberry, also Latham (midseason), Gatineau (very early) and September Everbearing. Strawberry plants, 40 varieties. Write for wholesale price list.
WALTER MORRIS & SON
Bradford, Mass.

EVERBEARING STRAWBERRY PLANTS
Streamliner and Superfection, \$15.00 per 1000; Gem, \$14.00; 20th Century, \$30.00.
Latham Raspberry plants, \$45.00. Send for prices in large amounts.
Plants guaranteed true to name, all large, healthy, first-year plants.
DAVIS PLANT FARM, HAMILTON, MONT.

CERTIFIED STRAWBERRY PLANTS
Blakemore \$6.00 per 1000
Gem Everbearing 8.00 per 1000
Tennessee Supreme 6.00 per 1000
Premier 6.00 per 1000
SAM PACK NURSERIES
Route 5 Smithville, Tenn.

9,500 Active Nurserymen are in need of stock.
List your offerings in the American Nurseryman Classified Section.

BULBS AND TUBERS

GROWING INSTRUCTIONS FREE
Selected Belgian-grown bulbs.
DOUBLE CAMELLIA-FLOWERING
Red, orange, salmon, yellow, scarlet, pink, copper, white, mixed.

Per 100 Per 1000
EXHIBITION SIZE \$14.00 \$120.00
2-in. 13.00 120.00
2 1/2 to 2-in. 9.00 75.00
1 1/2 to 1 1/4-in. 6.00 45.00

DOUBLE FIMBRIATA (Carnation-type), 6 separate colors or mixed.
DOUBLE PENDULA, in 6 colors
Double CAMELLIA, MARMORATA, ROSEBUD
TOP SIZE \$15.00 \$140.00
FIRST SIZE 12.00 110.00

Minimum order \$10.00.
Cash with order, P.O.B. Battle Creek, Mich.

VERONA GARDENS, TED GREVERS
Route 5 Battle Creek, Mich.

TUBEROUS BEGONIAS
Glant double-flowering Camellia type, 4 colors.
1 1/4 to 1 1/2-in. \$5.50 per 100, \$45.00 per 1000
1 1/2 to 2-in. 8.50 per 100, 75.00 per 1000
2-in. up 12.50 per 100, 115.00 per 1000
Double-flowering Carnation type, 4 colors
1 1/4 to 1 1/2-in. \$7.50 per 100, \$60.00 per 1000
1 1/2 to 2-in. 11.50 per 100, 100.00 per 1000
2-in. up 15.00 per 100, 140.00 per 1000
Minimum order \$5.00.
LOUIS DANK

1170 Broadway New York 1, N. Y.

FANCY-LEAVED CALADIUMS
The finest of commercial named varieties. Over 50 varieties. Fully upgraded.
Per 100 Per 1000
No. 3, 4 to 1 1/4-in. \$ 7.00 \$ 60.00
No. 2, 1 to 1 1/4-in. 12.00 110.00
No. 1, 1 1/4 to 2 1/4-in. 18.00 160.00
Jumbo, 2 1/4 to 3 1/4-in. 25.00 230.00
Mammoth, 3 1/4-in. up 37.00 350.00
Minimum order \$5.00.
Send for our color chart.

LOUIS DANK

1170 Broadway New York 1, N. Y.

GLOXINIAS
The best commercial varieties.
1 1/4 to 1 1/2-in. \$7.50 per 100, \$65.00 per 1000
1 1/2 to 2-in. 14.00 per 100, 130.00 per 1000
2 to 2 1/2-in. 22.00 per 100, 195.00 per 1000
Mammoth.
2 1/2-in. up 35.00 per 100, 300.00 per 1000
Minimum order \$5.00.

LOUIS DANK

1170 Broadway New York 1, N. Y.

Turn your Surplus Stock into cash with a Classified Ad in the American Nurseryman.

COTONEASTERS

COTONEASTER PRAECOX
This is one of the hardest Cotoneasters which went through 20 degrees below zero without any harm. It has large berries like Cranberries which color up in the middle of August and remain on until very late fall. It grows rather flat and makes an ideal plant to combine with foundation plantings, especially with ranch-type houses. Also suitable for low hedge around curves and in places where plants have to be kept low so as not to obstruct one's vision. We can offer the following for 1957.

Per 100 Per 1000
Strong, 1-yr. seedlings, \$25.00 \$225.00
branched, 4 to 8 ins. 50.00 450.00
Transplants, 2-yr., 8 to 12 ins. 50.00 450.00

Cotoneaster horizontalis, strong
1-yr. seedlings, 4 to 6 ins. 10.00 90.00
2-yr. transplants, 8 to 10 ins. 50.00 450.00
Cotoneaster divaricata,
1-yr. seedlings, 10 to 15 ins. 10.00 90.00
2-yr. seedlings, 12 to 18 ins. 17.50 150.00
C. HOOGENDOORN

Turner Rd. Newport, R. I.

CAMELLIAS

CAMELLIA SASANQUA
IN GAL-LON CONTAINERS
Excellent for retail sales.
BROADLEAF GARDENS
Route 13 Onley, Va.

CAMELLIAS

Growers of exceedingly new and outstanding Camellia Japonica and Camellia sasanqua only. 5000 grafts, 1, 2, 3, 4 and 5-year. Attractively priced at nursery, for cash. 65,000 sasanqua liners, 1 and 2-yr., field-grown sasanqua for understock, 1/2 to 3/4-in. caliper. Day Dream Cleopatra, br. excellent for canning. Investigate this money-making offer before buying.

WOODLAND NURSERY

R. 2, Box 15 Pascagoula, Miss.

CHIRYSANTHEMUMS

FLORETUM COLORFUL GARDEN MUMS Bred for early blooming, frost tolerance and winter hardiness. Ask for trade list.

PRAIRIE SOUTHWEST FLORETUM Fall River, Kan.

DAISIES

DAISIES.	100	1000
Edgebrook Giant	\$7.00	\$65.00
Mt. Shasta	7.00	65.00
Escher Road	7.00	65.00
May Queen	4.00	30.00

E. F. DUROSE NURSERY
Huntsville, Ala.

DOGWOOD

PINK-FLOWERING DOGWOOD (Cornus florida rubra) All Dogwood budded on transplanted seedlings, well spaced. We can furnish good quantities in all grades. About 50 per cent of the 2 and 3-year pink and double white have bloom buds.

1-YEAR	Each	10	100
18 to 24 ins., br.	\$1.50	\$11.50	\$100.00
2 to 3 ft., br.	1.50	13.50	125.00
3 to 4 ft., br.	1.85	17.50	165.00
Add 35c for B&B			
2-YEAR	Each	10	100
2 to 3 ft., br.	2.00	17.50	150.00
3 to 4 ft., br.	2.50	22.50	200.00
4 to 5 ft., br.	3.25	30.00	275.00
5 to 6 ft., br.	4.00	37.50	350.00
Add 50c per tree for B&B			
3-YEAR	Each	10	100
4 to 5 ft., br.	3.25	30.00	275.00
5 to 6 ft., br.	4.00	37.50	350.00
6 to 7 ft., br.	5.50	50.00	450.00
Add 50c per plant for B&B			

BYERS NURSERY CO.
Chase, Ala.

WHITE FLOWERING DOGWOOD

Nursery-grown transplants. Heavy caliper, well-branched. Each

2 to 4 ft., bare-root \$1.50

4 to 6 ft., B&B 1.95

4 to 5 ft., B&B 2.00

5 to 6 ft., B&B 2.25

6 to 7 ft., B&B 3.25

7 to 8 ft., B&B 4.50

8 to 9 ft., B&B 6.00

8 to 9 ft., B&B 8.00

We really have the buds this year.

Supply limited. Phone 335.

WHERRY'S NURSERIES, St. Marys, W. Va.

EVERGREENS, Liners

ROOTED CUTTINGS	Per 100	Per 1000
Arborvitae, woodwardi,		
4 to 6 in.	\$0.10	\$0.09
Arborvitae, nigra, green,		
4 to 8 in.	.10	.09
Arborvitae, pyramidal, 4 to 10,	.10	.09
Juniper, Andorra, 4 to 8-in.	.12	.11
Juniper, Pfitzer, 4 to 8-in.	.12	.11
Juniper, Hetz, 4 to 8-in.	.12	.11
Juniper, Irish, 4 to 8-in.	.11	.10
Taxus capitata (leaders),		
4 to 8-in.	.14	.13
Taxus cuspidata, 6 to 8-in.	.12	.11
Taxus hicksi, 6 to 8-in.	.12	.11

1-YR. TRANSPLANTS

Taxus cuspidata, 6 to 8-in. .22 .20

Taxus hicksi, 6 to 8-in. .22 .20

Taxus capitata (leaders), 6 to 10-in. .28 .25

2-YR. TRANSPLANTS

Juniper, Andorra, 10 to 12-in. .28 .25

Taxus cuspidata, 6 to 10-in. .30 .28

Taxus hicksi, 6 to 10-in. .30 .28

Arborvitae, nigra, green, 8 to 10-in. .25 .22

3-YR. TRANSPLANTS

Taxus hicksi, 6 to 10-in. .40 .38

50 of a variety at 100 rate.

250 of a variety at 1000 rate.

GRAFTS, 2 1/2-IN. AND 2 1/2-IN. POTS

Juniper, Canaert .06.55 .06.60

Juniper, Burk .65 .60

Juniper, Keteleer .65 .60

Juniper, glauca .65 .60

30 of a variety at 100 rate.

Grafted Koster Blue Spruce \$1.25 each

Free boxing.

2 per cent discount, cash with order.

DRAKE'S NURSERIES

G-4342 Branch Rd. Flint 6, Mich.

NANDINA PLANTS

3 to 4 ins. high; bed-grown, \$30.00 per 1000.

\$50 at \$1000 rate. Cash.

KRONE'S FLOWER SHOP & NURSERY

4221 Grand Ave. Fort Smith, Ark.

EVERGREEN LINERS AND CUTTINGS

FIELD-GROWN TRANSPLANTS

HEAVY, TRACTOR-CULTIVATED STOCK

Each 100 1000

Arborvitae, pyramidal,

10 to 12 ins., 3-yr. \$0.45 \$0.42

Arborvitae, globe woodwardi,

4 to 12 ins., 3-yr. .37 .35

Arborvitae, Am. nigra, dark

green, 10 to 15 ins. .45 .42

POT-GROWN STOCK (FROM 2 1/2-IN. POTS)

Sprayed with Parathion annually. Potted

in special clay peat fertilizer mixture. Grown

in open lath house or outside frames. No

light, soft greenhouse-grown stock.

Each, 100 1000

Arborvitae, American, dark green,

1-yr., 6 to 7 ins. \$0.27 \$0.25

Arborvitae, globe woodwardi, 1-yr.,

5 to 6 ins. .27 .25

Arborvitae, pyramidal, 1-yr.,

5 to 6 ins. .27 .25

Juniperus pfitzeriana armstrongi,

1-yr., 4 to 5 ins. .27 .25

Juniperus chinensis pfitzeriana,

1-yr. pots, 6 to 7 ins. .27 .25

Juniperus chinensis pfitzeriana,

2-yr. pots, 6 to 9 ins. .30 .28

Juniperus glauca hetzi, 1-yr.,

6 to 7 ins. .27 .25

Taxus hicksi, 2-yr., 5 to 6 ins. .30 .28

Euonymus alatus compactus, 2-yr.,

5 to 7 ins. .22 .20

Korean Boxwood, 1-yr., 3 ins. .22 .20

Viburnum, leather-leaved; 2-yr.

pots, 6 to 9 ins. .30 .28

Viburnum burkwoodi, 2-yr.,

6 to 9 ins. .22 .20

HEAVY ROOTED CUTTINGS

From flats, growing outside in lath house.

Ready for delivery now.

These extra hardy, outside-grown cuttings

can be potted any time, spring, summer, fall.

No soft greenhouse-grown stock.

Boxwood, Korean, hardy; 3 ins. \$0.11 \$0.10

Boxwood, sempervirens .09 .08

Euonymus alatus compactus,

3 to 4 ins., 2-yr., branched .09 .08

Juniperus glauca hetzi, 5 ins. .13 .12

Juniperus chinensis pfitzeriana,

6 to 7 ins. .13 .12

Arborvitae, pyramidal,

5 to 6 ins. .13 .12

Arborvitae, globe, 4 to 6 ins. .13 .12

Arborvitae, American, dark green;

5 to 6 ins. .13 .12

Taxus hicksi, 5 ins. .13 .12

Taxus intermedia, 3 to 4 ins. .13 .12

Taxus media, 3 to 4 ins. .13 .12

TERMS: Packing and boxing free. 3 per

cent discount for cash with order.

Our stock guaranteed 100 per cent satisfac-

tory or return within 6 days for full refund,

plus full shipping charges paid.

250 plants of each variety at 1000 rate.

MIAMI NURSERY CO.

Corner of State Rts. 25 and 71

Tipp City, O.

EVERGREENS

Tough, hard plants, grown in full sun.

3 to 5 ins. 5-7 7-9 9-11

Riata, aurea nana .10c 12c 15c

Riata, bakeri .6c 8c 12c

Riata, excelsa .6c 8c 10c 15c

Riata, bonita .8c 10c

Riata, sybilla .8c

Thuja globosa woodwardi .8c 10c 15c

Buxus japonica .4c

Buxus sempervirens .4c

Buxus suffruticosa .10c

R.C. 6-8 8-10 9-12 15-18

Abelia .4c

Hex rotundifolia .4c 6c 8c 12c 25c

Hex convexa .4c

Hex burfordi .4c 6c 8c 15c 20c

Ligustrum lucidum .4c

Pyracantha lalandi .4c

12 to 15 ins. 12c.

Pyracantha formosana,

12 to 15 ins. 12c.

Pittosporum tobira .5c

Junipers, stricta .10c

glauca hetzi .6 10c 12c

Irish .8c

pfitzeriana .8c 15c

depressa .12c

Retinospora plumosa .10c

Retinospora plumosa.

green .5c

Quince (flowering

red) .5c 8c

Chamaecyparis

squarrosa vetchei .5c

THE BUSH RANCH

140 Woodland Dr. Thomasville, Ga.

SURPLUS LINING-OUT STOCK

600 Andorra Juniper, 8 to 10 in., tr. \$0.35

600 Sherman Arborvitae, 8 to 10 in., tr. .35

500 Nigra Arborvitae, 8 to 10 in., tr. .35

600 Pyramidal Arb., 8 to 10 in., tr. .35

300 Globe Arborvitae, 8 to 9 ins., tr. .35

500 Oriental Arborvitae (Rochester),

18 to 24 ins., tr. .35

400 Burk Juniper, 1-yr. pots .40

250 Burk Juniper, 12 to 15 ins., tr. .70

1000 Douglas Fir, 9 to 12 ins., tr. .35

200 Keteleer Juniper, 12 to 15 ins., tr. .65

1000 Pfitzer Juniper, 6 to 8 ins., tr. .35

1000 Pfitzer Juniper, 9 to 12 ins., tr. .50

750 Scotch Pine, 12 to 15 ins., tr. .35

400 Capitata Yew, adlcs., 9 to 12 ins., tr. .60

400 Capitata Yew, adlcs., 12 to 15, tr. .75

HENRY NURSERIES, HENRY, ILL.

EVERGREENS, SEEDLINGS

2-YR. SEEDLINGS

Per 100 Per 1000

Scotch Pine (Austrian seed),

6 to 12 ins. \$7.50 \$30.00

Scotch Pine (Austrian Seed),

8 to 15 ins. 8.50 32.50

Scotch Pine (Riga), 4 to 8 ins. 7.50 30.00

Scotch Pine (Riga), 6 to 10 ins. 8.50 32.50

Austrian Pine (Alps Mt.),

4 to 8 ins. 7.00 30.00

Japanese Black Pine,

4 to 8 ins. 7.50 37.50

Colorado Blue Spruce,

2 to 5 ins. 6.00 25.00

Norway Spruce, 5 to 10 ins. 7.00 30.00

American Arborvitae,

3 to 6 ins. 6.50 30.00

Douglas Fir (Col. seed),

4 to 8 ins. 6.00 30.00

Douglas Fir (Col. seed),

4 to 8 ins. 7.00 35.00

3-YR. SEEDLINGS

Colorado Blue Spruce,

4 to 8 ins. 8.00 40.00

Colorado Blue Spruce,

5 to 10 ins. 9.00 45.00

Japanese Fir (Nikko),

4 to 8 ins. 20.00

Scotch Pine (Austrian

(seed), 12 to 18 ins. 11.00

Scotch Pine (Scotland),

8 to 15 ins. 10.00 50.00

EVERGREENS, Liners—Continued

BED-GROWN LINERS			
Per 100	6 to 8 ins.	8 to 10 ins.	10 to 15 ins.
Cedrus deodara	\$10.00	\$12.50	
Gardenia Mystery	10.00		
Gardenia radicans	10.00		
Gardenia stricta nana	10.00	\$12.50	
Ilex cornuta burfordii	10.00	12.50	15.00
2-yr., heavy, \$20.00 per 100			
Ilex crenata bullata	12.50	15.00	17.50
2-yr., heavy, \$25.00 per 100			
Ilex crenata macrophylla	12.50	15.00	17.50
2-yr., heavy, \$25.00 per 100			
Ilex crenata rotundifolia	10.00	12.50	15.00
2-yr., heavy, \$20.00 per 100			
Ilex opaca East Palatka	17.50	20.00	
Ilex opaca femina	17.50	20.00	
Juniperus glauca hetzi	17.50		
Ligustrum luc. compactum	10.00	15.00	
Magnolia grandiflora	15.00		
Nandina domestica	10.00	15.00	
4 to 6 ins. \$8.50 per 100			
Pyracantha, early red	15.00		
Pyracantha graberi	15.00		

We also have excellent potted liners of many items. See our separate listing on these in this issue. Wholesale catalog furnished free upon request.

COTTAGE HILL NURSERY
4000 Japonica Lane Mobile, Ala.

EVERGREEN LINERS			
Each	100	1000	
PFITZER JUNIPER			
2 1/2-in. pots, 1-yr.	\$0.22 1/2	\$0.18 1/2	
Rooted cuttings	.13	.12	
BURK JUNIPER			
2 1/2-in. pots, 1-yr.	.27 1/2	.22 1/2	
ARMSTRONG PFITZER JUNIPER			
2-in. pots, 1-yr.	.22 1/2	.18 1/2	
2-in. pots, 2-yr.	.26 1/2	.22 1/2	
BERCKMANS' BIOTA A. N.			
2-in. pots, 1-yr.	.22 1/2	.18 1/2	
(Delivery May 1)			
WOODWARD GLOBE ARBORVITAE			
Field-grown, 4-yr.	.55	.50	
TERMS: Cash with order. Free packing.			
Orders for spring held for one-fourth deposit.			
300 plants of one variety at 1000 rate.			
Not less than 50 of a variety.			
VOGE NURSERY			
New Lebanon, O.			

HEAVY ROOTED CUTTINGS			
Per 100	Per 1000		
Arborvitae, American, dark green; 6 to 10 ins.	\$0.10	\$0.09	
Arborvitae, pyramidal, 6 to 10 ins.	.10	.09	
Arborvitae, globe, 6 to 8 ins.	.10	.09	
Juniper, Hetz glauca, 6 to 10 ins.	.11	.10	
Juniper, Pfitzer, 6 to 10 ins.	.11	.10	
Juniper, Savin, 6 to 10 ins.	.11	.10	
Juniper, Von Ehron, 6 to 10 ins.	.11	.10	
Juniper, Andorra, 6 to 10 ins.	.11	.10	
Taxus cuspidata, 6 to 10 ins.	.12	.11	
Taxus hicksii, 6 to 10 ins.	.12	.11	
Spring delivery.			
Cash with order earns free packing.			
DE WINTER'S NURSERY			
653 Port Sheldon Rd.			
Grandville, Mich.			

POTTED LINERS			
2 1/2-in. pots	Per 100	Per 1000	
Taxus capitata, 2-yr.	\$23.00	\$220.00	
Taxus cuspidata, 1-yr.	17.00	160.00	
2-yr.	22.00	200.00	
Taxus hicksii, 1-yr.	18.00	170.00	
2-yr.	23.00	230.00	
Taxus Moon's Cammar, 2-yr.	22.00	210.00	
Taxus brownii, 1-yr.	18.00	170.00	
Taxus andersonii, 1-yr.	18.00	170.00	
Juniperus hetzi, 2-yr.	24.00	230.00	
Juniperus pfitzeriana, 1-yr.	20.00	180.00	
2-yr.	24.00	230.00	
TERMS: No charge for packing. 25 per cent with order, balance C.O.D. 250 of a variety at 1000 rate.			
HEASLEY BROS. NURSERY			
Box 218, R. D. 1			
Greensburg, Pa.			

QUALITY LINERS			
	Per 100		
Blue Atlas Cedar, 12 to 18 ins., sdgs.	\$17.50		
Douglas Fir, 6 to 10 ins., tr.	20.00		
Viburnum carlesii, 4 to 8 ins., sdgs.	20.00		
Taxus capitata (from seed), 4 to 8 ins.	20.00		
Canadian Hemlock, 4 to 8 ins., tr.	20.00		
Mugho Pine (dwarf), 4 to 8 ins., tr.	20.00		
Colorado Blue Spruce, 5 to 10 ins., tr.	22.50		
Enkianthus camp., 8 to 12 ins., tr.	25.00		
American Holly, 6 to 12 ins., tr.	27.50		
Ilex crenata, 8 to 12 ins., heavy tr.	25.00		
Rho. hybrids (red seed), 4 to 10 ins.	50.00		
Pink Fig, Dogwood, 10 to 15 ins., grafts	75.00		
Send for new spring list.			
POSSUM HOLLOW NURSERIES			
6905 Henley St.			
Philadelphia 19, Pa.			

EVERGREEN LINERS			
	Per 100		
Pfitzer, 4-yr., XX, heavy,			
sheared, 12 to 15 ins.	\$55.00		
Pfitzer, 3-yr., XX, 9 to 12 ins.	40.00		
Von Ehron, XX, heavy, 12 to 15 ins.	55.00		
EUROPEAN WHITE BIRCH LINERS			
	Per 100		
2 to 3 ft.	\$16.00		
3 to 4 ft.	26.00		
4 to 5 ft.	40.00		

These are fine for sale lots.
Deduct 10 per cent for cash with order.

DAMASCUS NURSERIES
Damascus, O.

EVERGREENS			
	100	1000	
Scotch Pine, 2-yr., 4 to 8 ins.	\$3.50	\$20.00	
Scotch Pine, 3-yr., 5 to 12 ins.	7.00	35.00	
Scotch Pine, 4-yr., 6 to 15 ins.	7.00	40.00	
Scotch Pine, 2-2, 10 to 20 ins.	12.00	65.00	
Red Pine, 2-yr., 2 to 4 ins.	3.50	20.00	
Red Pine, 3-yr., 6 to 14 ins.	6.00	30.00	
Austrian Pine, 2-yr., 3 to 6 ins.	3.50	20.00	
Austrian Pine, 3-yr., 6 to 12 ins.	6.00	30.00	
Norway Spruce, 2-yr., 3 to 5 ins.	3.50	20.00	
Norway Spruce, 3-yr., 6 to 14 ins.	7.50	40.00	
American Arborvitae, stocky well-branched trees, 3-yr., 4 to 9 ins.	6.00	30.00	

CHAPMAN NURSERY
553 Church St. Indiana, Pa.

PINES			
	Per 100	Per 1000	
Austrian Pine, 5 to 10 ins., 3-0.			
root-pruned	\$ 8.00	\$40.00	
Red Pine, 6 to 12 ins., 3-0.			
root-pruned	8.00	40.00	
White Pine, 4 to 10 ins., 3-0.			
root-pruned	8.00	40.00	
Scotch Pine, 8 to 24 ins., 4-0.			
twice undercut	16.00	80.00	
Scotch Pine, 12 to 18 ins., 4-1.			
transplants	30.00		
Scotch Pine, 8 to 12 ins.	30.00		
Mugho Pine, 2 to 4 ins., 3-0.	5.00	35.00	

FARM LANDSCAPE CO. Urbana, Ill.

PINE, SPRUCE SEEDLINGS			
	100	1000	
Scotch Pine, 2-yr., 4 to 8 ins.	\$4.00	\$25.00	
(Best what is offered.			
Quantity discounts.			
Scotch Pine, 3-yr., 8 to 14 ins.	5.00	35.00	
Colo. Blue Spruce, 4-yr.			
6 to 12 ins.	8.00	50.00	
Juniperus glauca hetzi, 2-yr.			
6 to 12 ins.	25.00		
Spreading Jap. Yew, 3-yr.			
4 to 8 ins.	30.00		

Write for complete list.
PAINT CREEK NURSERIES
R. D. 1 Shippville, Pa.

LINING-OUT STOCK			
	Each	100	1000
Ilex convexa, 6 to 8 ins.	\$0.30	\$0.25	
Ilex hetzi, 8 to 12 ins.	.40	.35	
Ilex rotundifolia, 6 to 8 ins.	.30	.25	
Ilex rotundifolia, 8 to 12 ins.	.40	.35	
Grown 2 years in beds, planted 8 ins. apart.			
The larger size makes ideal plants for gallon cans and direct sales.			
Pieris japonica, 6 to 9 ins.	\$0.30	\$0.25	
GERARD K. KEVIN, INC., MENTOR, O.			
Wholesale Rose Growers and Nurserymen.			

COLORADO-GROWN LINERS			
	Each	100	1000
Colorado Blue Spruce,			
2 to 3 ft.	\$ 35.00	per 1000	
3 to 4 ft.	60.00	per 1000	
4 to 5 ft.	100.00	per 1000	
transplants, 5 to 8 ins.	100.00	per 1000	
Austrian Pine, 6 to 10 ins.	35.00	per 1000	
10 to 14 ins.	50.00	per 1000	
Black Hills Spruce, 3 to 6 ins.	50.00	per 1000	
Colorado concolor Fir,			
3 to 6 ins.	40.00	per 1000	

WESTERN EVERGREENS
14355 W. 44th Golden, Colo.

PINUS STROBUS (WHITE PINE)			
	Each	100	1000
Nursery-grown, transplanted,			
2 to 3 ft.	\$1.50	\$1.25	
3 to 4 ft.	2.25	2.00	
4 to 5 ft.	3.00	2.75	
5 to 6 ft.	4.25	4.00	
Larger sizes quoted by request.			
J. A. WEDDINGTON & SON			
4414 Holston Drive Knoxville, Tenn.			
Phone Knoxville 3-4417			

POTTED LINERS, 2 1/2-IN.			
	Per 100		
Pfitzer Juniper, 6 to 10 ins.	\$0.14		
Ilex burfordii, 6 to 10 ins.	.12		
Ilex rotundifolia, 5 to 10 ins.	.10		
Nandinas, 4 to 8 ins.	.10		
ROOTED CUTTINGS			
	Per 100		
Pfitzer Juniper, 6 to 10 ins.	\$0.06		
Ilex burfordii, 4 to 6 ins.	.03 1/2		
Ilex rotundifolia, 4 to 6 ins.	.03 1/2		
J. G. TSCHINKEL			
115 N. Plymouth Huntsville, Ala.			

EVERGREENS			
	Per 100		
From open beds and the field.			
Pfitzer Juniper, 4 to 6 ins.	\$0.06		
Ilex rotundifolia, heavily rooted cuttings	.03		
Ilex burfordii, heavily rooted cuttings	.02		
4 to 6 ins., 1-yr.	.05		
Nandinas, 2 1/2-in. pots, 3 to 5 ins.	.10		
seed, per lb.	1.00		
Eunonymus patens, rooted cuttings	.02		
Ligustrum lucidum, rooted cuttings	.02		
E. F. DUBOSE, HUNTSVILLE, ALA.			

SURPLUS LINERS			
	Per 100		
In open beds 1 year without shade.			
Husky, hardy and heavily rooted.			
2000 Taxus cuspidata	25c each		
200 Taxus hicksii	24c each		
200 Ilex crenata	20c each		
200 Irish Juniper	20c each		
Order now for spring delivery.			
CRUMRINE NURSERY			
	Per 100		
R. D. 2 Alliance, O.			

ANDORRA JUNIPER			
	Per 100		
Field tr., 6 to 10 ins.	\$12.00		
Field tr., 9 to 12 ins.	18.00		
12 to 15-in. spruce	75.00		
Cash with order, please			
WHERRY'S NURSERIES, St. Marys, W. Va.			

EVERGREEN LINERS			
	6 to 8 ins.	8 to 12 ins.	
Gardenia Hadley	8c	10c	
Gardenia radicans	8c	10c	
Gardenia velutina	10c	12 1/2c	
Ilex rotundifolia	8c	10c	
Ilex burfordii	10c	12 1/2c	
Ligustrum lucidum	8c	10c	
Write for a complete list.			
FLOWERWOOD NURSERY, INC.			
P. O. Box 185 Cairo, Ga.			

BALSAM FIR FOR CHRISTMAS TREES			
	Per 100		
Round needle type, carefully collected, packed and properly packed. These seedlings are tall enough to survive in heavy grass weeds or trash in any plantation.			
8 to 12 ins., \$35.00; 12 to 20 ins., \$40.00 per 1000. Will ship 10 per cent extra stock with order of 5000 or over.			
ST. REGIS TREE NURSERY			
	Per 100		
St. Regis Falls, N. Y.			

POTTED LINERS, 2 1/2-IN.			
	Per 100		
Entire stock, 7000 quality Evergreens, consisting of Yew, Holly, Azaleas, Pieris, etc.			
Entire lot on cash and carry basis, removing by April 1.			
Your inquiry and offer invited.			
FLANK H. SEXTON			
522 Velde Ave. Delair, Camden Co., N. J.			

EVERGREENS			
	Per 100		
See our Classified ad in this issue under LINING-OUT STOCK.			
T. G. OWEN & SONS, INC.			
Columbus, Miss.			

PFITZER JUNIPER			
	Per 100		
Unrooted cuttings, 6 to 10 ins. long, \$10.00 per 1000. Cash.			
KRONE'S FLOWER SHOP AND NURSERY			
4221 Grand Ave. Fort Smith, Ark.			

NANDINA SEEDLINGS			
	Per 100		
8 to 10 ins.	\$10.00		
12 to 15 ins.	15.00		
PINKSTON NURSERIES			
	Per 100		
Parrott, Ga.			

EVERGREENS, B&B			
	Per 100		
JUNIPERUS ASHFORDI			
Nice, well-sheared and heavy.			
3 to 4 ft., \$2.00 each; 50 or over, \$1.75 each			
4 to 5 ft., \$2.50 each; 50 or over, \$2.25 each			
Heavy, well-sheared heavily berried.			
3 to 4 ft., \$2.50 each; 50 or over, \$2.25 each			
LIGUSTRUM LUCIDUM (WAX)			
30 to 35 ins. high, heavy, compact, as broad as high, real nice, \$2.00 each.			
ROBINSON NURSERY, INC.			
Phone Wallace, N. C. 5469 Willard, N. C.			

NATIVE CHERRY LAURE

FRUIT TREES

Trees are big and grades are strong.

Fine for retail sales.

PEACHES, 1-YR.

	Each	10	100
1/16-in. 4 to 5 ft.	\$0.50	\$7.00	\$65.00
3/16-in. 3 to 4 ft. ....	.70	6.00	55.00
7/16-in. 2 to 3 ft. ....	.60	5.00	45.00
Champion, Cumberland, Elberta, Early Elberta, Fairhaven, Golden Jubilee, Halehaven, J. H. Hale, Redhaven, Sun Glo.			
APPLES, 2-YR., STANDARD			
1/16-in. up to 7 ft.	\$1.00	\$8.50	\$75.00
Baldwin, Cortland, Early Harvest, Grimes Golden, McIntosh, Red Delicious, double Red Delicious, Rome Beauty, Stayman, double Red Stayman, Yellow Delicious.			
BARTLETT PEAR, 2-YR.			
1/16-in. 4 to 5 ft.	\$1.00	\$8.50	\$75.00
3/16-in. 3 to 4 ft. ....	.90	8.00	70.00
STANLEY PLUM, 2-YR.			
1/16-in. 4 to 5 ft.	1.00	9.00	....
HUNGARIAN APRICOT, 1-YR.			
3 to 4 ft.	1.00	8.50	75.00
NECTARINES, 1-YR.			
3 to 4 ft.	1.00	8.50	75.00
Garden State, Surecrop.			
F.O.B. Clyde, O. Packing extra at cost.			
THE CLYDE NURSERY, CLYDE, O.			

NOW IS THE TIME TO ORDER YOUR FLOWERING CRAB GRAFTS. FLOWERING CRAB BENCH GRAFTS. We can still supply a few 1000 flowering Crab bench grafts in the following varieties, for early spring delivery: Almey, Red Silver, Kingmere, Jay Darling, Wabiskaw, Purple, double Chinese White, Aldenham, Column Cherry, Flame, White and Eley. All grafts tied in bundles of 100 per variety.

Per 100	Per 500	Per 1000
\$25.00	\$112.50	\$200.00

APPLE BENCH GRAFTS

Standard varieties, tied 100 per bundle.

Per 100	Per 500	Per 1000
\$15.00	\$62.50	\$100.00

EGYPTIAN NURSERY & LANDSCAPE CO.
Farina, Ill.

DWARF APPLE STOCK SCION WOOD

Malling, Nos. 1, 2, 7 and 9.
For pie root grafting.
Scions are 14 ins. to 2 ft. long, 3/4-in. and up.
Can be shipped immediately.
Prices on request.

V. KRAUS' NURSERIES

Carlisle, Ont., Canada
Phone Waterdown MU. 9-4622

GARDEN ROOTS

CHIPMAN'S CANADA RED RHUBARB
These plants are No. 1 grade, true Chipman and in perfect condition, \$30.00 per 100, \$250.00 per 1000.
Inquire for large quantity prices.
Can ship immediately.
C. D. WRIGHT, HAMBURG, IA.

Chipman's Canada Red and MacDonald Red Rhubarb, good No. 1 divisions. Write for prices.
Chipman's Berry Farm, East Leroy, Mich.

GRAPEVINES

GRAPE CUTTINGS
Concord and Fredonia, cut by experienced workmen, from clean, healthy vineyard, largest in Oklahoma. Tied with wire, 100 to bunch, \$5.00 per 1000. F.O.B. here.
IDEAL FRUIT FARM, STILWELL, OKLA.

GRASS

CERTIFIED MEYER Z-52 ZOYSIA GRASS
Producers of Meyer Z-52 Zoysia.

Superior lawn grass.
Fresh cut from our nursery.
\$50.00 per 1000, 2-in. plugs.
50 plug flats available for profitable retail display sales.
Packed 50 plugs per lightweight, waterproof cardboard flats.
Shipped 4 flats, \$10.00 per carton, F.O.B.
Planting instructions free.
Returns \$20.00 per carton.
Plugging tools available, \$1.50 each.
Express or parcel post.
MIAMI NURSERY CO.
Corner of State Rts. 25 and 71
Tipp City, O.

GROUND COVERS

SPRING 1957 DELIVERY.
QUALITY AND QUANTITY FOR LARGE LANDSCAPE JOBS AND GARDEN SHOP SALES.

	Per 100	Per 1000
EUONYMUS fortunei (ACUTUS)		
1-yr. pots	\$12.50	\$110.00
2-yr. pots	15.00	140.00
EUONYMUS fortunei COLORATUS		
1-yr. pots	12.50	110.00
2-yr. pots	15.00	140.00
ALUGA REPTANS RUBRA		
1-yr. pots	15.00	125.00
(200 at The 1000 RATE)		

CUNNINGHAM GARDENS, INC.
Waldron, Ind.

HARDY PLANTS

ASTILBES AND FUNKIAS

	Per 10	Per 100
ASTILBES, 1-yr., field clumps, 3 to 5 eyes.		
Deutschland, pure white	\$4.00	\$35.00
Fanol, intense red	4.00	35.00
Gertrude Briz, carmine-red	4.00	35.00
W. Reeves, scarlet-red	4.00	35.00
FUNKIA undulata media var., 3 to 5 eyes	4.00	35.00

HOLLANDIA GARDENS

10725 39th Ave., N.E. Seattle 55, Wash.

GERBERAS, PRIZE-WINNING STOCK

	Per 100	Per 1000
Medium (duplex)	\$11.00	\$100.00
Large (duplex)	15.00	135.00
Jumbo (duplex)	25.00	225.00

FREE COLORED PHOTO.

250 at 1000 rate, F.O.B. San Fernando.
Selected duplex seed \$5.50 per oz.
Other fine perennials. Write for catalog.
FEADER WHOLESALE NURSERIES
P. O. Box 428 San Fernando, Calif.

Japanese Iris (Kaempferi), large blooming-size divisions from the finest Iris that grows; assorted colors, \$10.00 per 100.

Extra early May Daisy plants, 3-in. white flower; the kind that pays off, \$6.00 per 100.
Queen Anne's Lace, large plants, \$6.00 per 100.
V. W. Wilson, R. 3, Box 184, Savannah, Ga.

FEVERFEW, ALL-DOUBLE WHITE
100,000 early, outdoor, sand-rooted, double, pure white, extra large; from long improved, carefully selected stock plants, \$2.50 per 100, \$18.00 per 1000. There's no risk to run when you select rooted cuttings from select stock!
E. F. DuBOSE NURSERY
Huntsville, Ala.

GAILLARDIA SUN GOD
Aristocrat of the flower garden; produces many solid golden flowers on long, graceful stems; cut flower or garden. Large field plants, \$3.00 per 100, \$25.00 per 1000.
E. F. DuBOSE NURSERY
Huntsville, Ala.

America's best source for Hardy Plants
THE WAYSIDE GARDENS
Mentor, Ohio
Write for Trade List.

Iberis sempervirens, hardy white Candy-tuft. Heavy field-grown plants, \$12.50 per 100, \$115.00 per 1000, 250 at 1000 rate.
Fowler's Nursery, Raleigh, N. C.

MODERN HARDY PERENNIALS
New trade list now ready.
FLEMING'S FLOWER FIELDS
3100 Leighton Ave. Lincoln 3, Neb.

WELLER'S BETTER PERENNIALS
WELLER NURSERIES CO., Holland, Mich.
Write for trade list.

HELLEBORUS

HELLEBORUS NIGER
(Christmas Rose)
Our own
3-yr. transplants,
\$50.00 per 100,
\$450.00 per 1000.
C. HOOGEENDOORN
Turner Rd. Newport, R. I.

HOLLY

ILEX ROTUNDIFOLIA
ILEX CRENATA CONVEXA (BULLATA)
4 to 6 ins. 6c
6 to 8 ins. 8c
8 to 12 ins. 12c
All good color, twice transplanted, grown in outdoor beds 12 months or more; mostly branched.

B. F. PONDER Lanett, Ala.

HOLLY
45 English and hybrid varieties, 25 American, 10 Asiatic. Cutting-grown plants, well-rooted and hardened for spring delivery. Full replacement guarantee to bona fide nurserymen and florists. Write for stock list and new low prices.

WILMAT HOLLY CO.
302 State Rd. Gladwyne, Pa.

HOLLY
Lining-out stock,
Spring, 1957 shipment.
Hex convexa, 2-yr., potted 25c
Hex rotundifolia, 2-yr., field 25c
CONNOR & AMOS, INC.
129 Old Dutch Rd.
Charleston, W. Va.

ILEX OPACA
SUPERIOR NAMED VARIETIES
WHOLESALE SUPPLIERS
OF LINING-OUT STOCK.
Write for price list.
HOLLY HAVEN, INC.
Box 75 New Lisbon, N. J.

ILEX CORNUTA BURFORDI
300 well-shaped, 4 to 5 ft.,
in the field, \$900.00.
B&B, F.O.B. Clemson, \$1200.00.
SARAH W. HODGES, BOX 175, Clemson, S.C.

HONEYSUCKLES

SHEARED CHINESE HONEYSUCKLE

Lonicera chinensis atropurpurea, "Texas" or "Sneed's" Ideal for difficult situations. Full, compact heads.
8 to 12 ins. \$6.50
12 to 15 ins. 8.50
15 to 24 ins. 1.00
Packed bare-root, in moss. Ready for landscape work, for culling. Shipped motor freight, F.O.R. here.
SARVER NURSERY CO.
San Marcus, Calif.

HONEYSUCKLES

Lonicera Japonica halliana, extra-heavy No. 1, 2 and 4-yr., 18 to 24-in. field plants, 3, 4 to 6 leads, \$40.00 per 1000; lighter grade, \$30.00 per 1000; sample 100, \$4.00. Experienced labor for grading and packing quantity orders. Immediate shipment. No order too large. Phone: Or 2-4612.
ROBINSON NURSERY CO., Greenville, Ga.

IVIES

BALTIMORE IVY

Hardest Ivy. Fine for wall or ground cover. True stock. Well rooted plants, 8 to 12-in. vines. Per 100 Per 1000
2-in. pots \$12.00 \$100.00
2 1/2-in. pots, branched 20.00 190.00
Delivery now or later.
STRATFORD GARDENS
Russell Breece, Mtd. Rt. 9 Delaware, O.

LINING-OUT STOCK

EVERGREENS

Andorra Juniper, 6 to 10 ins. \$6.00
bare-root \$6.00
*Andorra Juniper, 6 to 10-in. bands 14 1/2
Blue Hetz Juniper, 6 to 10 ins.,
bare-root07
Dwarf Pfitzer (nana) Juniper20
(Armstrong), 5 to 8-in. bands14 1/2
Pfitzer Juniper, 6 to 8-in. bands20
Pfitzer Juniper, 8 to 10-in. bands06
*Savin Juniper, 6 to 10 ins., bare-root06
Von Ehron Juniper, 8 to 10 ins.,
bare-root06
*Hermann's Golden Arb., 5 to 6-in.
bands20
Anderson's Yew (spreading), 4 to
6 ins., bare-root10
Spreading Japanese Yew, 6 to 8-in.
bands20
Blue Spiraea (Caryopteris), 8 to 12
ins.03 1/2
Buddelias, best blue; 6 to 10 ins.06
Buddelias, best red; 6 to 10 ins.06
Buddelias Snowbank, 6 to 10 ins.06
Blue-leaved Arctic Willow, 6 to 8 ins.05
Chinese Privet, Wayside Gardens
strain, 6 to 10 ins.03 1/2
Forsythia Arnold's Giant, new dwarf,
4 to 5 ins.10
Forsythia Lynwood Gold, 6 to 10 ins.06
Forsythia Spring Glory, 6 to 10 ins.04
Hypericum Hidcote, 4 to 6 ins.08
Spiraea Froebel, 4 to 5 ins.03 1/2
Viburnum tomentosum, 4 to 6 ins.08
Weigela Eva Rathke, 4 to 6 ins.06
Weigela vaniceki, 4 to 6 ins.06

BROADLEAFS

Euonymus coloratus, 6 to 10 ins.03 1/2
Euonymus patens, small, medium or
large-leaved, 6 to 10 ins.04
Euonymus patens Newport (no berries), 6 to 8 ins.08
Pyracantha lalandi, 5 to 6 ins.05
Pyracantha Kusan, 5 to 6 ins.12
Purple-leaved Honeysuckle vine, 5 to 6
ins.05
Variegated-leaved Honeysuckle vine,
4 to 5 ins.06
Euonymus radicans, upright
(Sarcocoe), 4 to 6 ins.08

PERENNIALS

Lavandula vera04
Lythrum Mordens Pink05
Phlox subulata Emerald Blue03 1/2
Phlox subulata Emerald Pink03 1/2
Phlox subulata, best pink04
Teucrium chamaedrys04
Less than 300 total order, add 2c per plant.
Starred varieties ready in spring. All others
any time. Book your order for spring.
MCINCH GREENHOUSES
St. Joseph, Mo.

POTTED LINERS

	Per 100	Per 1000
Ardisia crenulata		\$20.00
Ilex cornuta burfordi, 6 to 8 ins.		12.50
Ilex 12 ins.		15.00
Ilex crenata helleri, 6 to 8 ins.		17.50
Ilex opaca East Palatka, 8 to 12 ins.		20.00
Ilex opaca femina, 8 to 12 ins.		20.00
Juniperus glauca hetzi, 8 to 12 ins.		17.50
Magnolia fuscata, 3-in. pots, 8 to 12 ins.		15.00
Osmanthus fortunei, 8 to 12 ins.		17.50
12 to 18 ins.		15.00
Osmanthus fragrans, 8 to 12 ins.		15.00
Pyracantha, early red; 8 to 12 ins.		17.50
Pyracantha graberi, 8 to 12 ins.		17.50
Pyracantha lalandi, 8 to 12 ins.		17.50

We also have a fine stock of Camellia japonica and Camellia sasanqua in pots. Varieties and prices furnished upon request. Write for our wholesale catalog.
COTTAGE HILL NURSERY
4000 Japonica Lane Mobile, Ala.

LINING-OUT STOCK—Continued

LINING-OUT LIST
PRICES SUBJECT TO CHANGE
WITHOUT NOTICE.
ALL POTTED LINERS ON THIS LIST
ARE PRICED FOR SHIPMENT IN PAPER
POTS OR CUPS. THOSE WHO PREFER
THE ORDINARY METHOD OF PACKING
OMITTING THIS ADDED PROTECTION,
MAY DEDUCT 1¢ PER PLANT. THE 1000
RATE APPLIES ON ALL ORDERS THERE-
FORE, PLEASE ORDER IN MULTIPLES
OF 25 OR MORE.

	EACH.	PER 1000
BIOTA AUREA NANA		
2 1/2-in. pots	\$0.22	
BIOTA AUREA PYRAMIDALIS		
COMPACTA		
2 1/2-in. pots	.18	
2 1/2-in. pots	.20	
BIOTA BONITA		
2 1/2-in. pots	.16	
2 1/2-in. pots	.17	
BIOTA EXCELSA		
2 1/2-in. pots	.18	
2 1/2-in. pots	.20	
BIOTA SEBILI		
2 1/2-in. pots	.18	
2 1/2-in. pots	.20	
BUXUS JAPONICA		
2 1/2-in. pots	.16	
2 1/2-in. pots	.18	
CEDRUS DEODARA		
6x8-in. seedlings	.10	
2 1/2-in. pots	.16	
2 1/2-in. pots	.17	
CHAMAECYPARIS LAWSONIANA		
ALLUMI (Blue Lawson Cypress)		
2 1/2-in. pots	.18	
2 1/2-in. pots	.20	
CUPRESSUS COMPLANATA		
(Italian Cypress)		
2 1/2-in. pots	.17 1/2	
2 1/2-in. pots	.20	
JUNIPERUS CHINENSIS		
PITZERIANA		
Rooted cuttings	.10	
2 1/2-in. pots	.18	
2 1/2-in. pots	.17	
JUNIPERUS CHINENSIS		
PITZERIANA COMPACTA		
Rooted cuttings	.10	
2 1/2-in. pots	.18	
2 1/2-in. pots	.17	
JUNIPERUS CHINENSIS		
PITZERIANA NANA		
Rooted cuttings	.12	
2 1/2-in. pots	.20	
2 1/2-in. pots	.25	
JUNIPERUS CHINENSIS FORTUNEI		
2 1/2-in. pots	.12	
JUNIPERUS CHINENSIS		
VIRIDIFOLIA		
2 1/2-in. pots	.20	
2 1/2-in. pots	.22 1/2	
JUNIPERUS COMMUNIS CRACOVIA		
(Polish Juniper)		
2 1/2-in. pots	.15	
JUNIPERUS HIBERNICA		
PASTIGIATA		
2 1/2-in. pots	.15	
2 1/2-in. pots	.16	
JUNIPERUS HORIZONTALIS		
PLUMOSA (Andorra Juniper)		
2 1/2-in. pots	.16	
2 1/2-in. pots	.17	
JUNIPERUS JAPONICA VIRGINALIS		
2 1/2-in. pots	.20	
JUNIPERUS VIRGINIANA		
KETELEERI		
2 1/2-in. pots	.20	
2 1/2-in. pots	.25	
TAXUS CUSPIDATA		
2 1/2-in. pots	.17	
2 1/2-in. pots	.18	
3-in. pots	.20	
TAXUS MEDIA WARDI		
2 1/2-in. pots	.18	
AZALEA CHRISTMAS CHER		
2 1/2-in. pots	.15	
ABELIA GRANDIFLORA		
2 1/2-in. pots	.14	
2 1/2-in. pots	.16	
RUXUS SEMPERVIRENS CRONI		
2 1/2-in. pots	.20	
2 1/2-in. pots	.22 1/2	
BUXUS JAPONICA		
6x8-in. field-grown, TTT	.22 1/2	
3-in. pots	.25	
CAMELLIA SASANQUA (Dawn)		
2 1/2-in. pots	.16	
CAMELLIA SASANQUA		
(Maiden's Blush)		
2 1/2-in. pots	.16	
2 1/2-in. pots	.18	
ELAEAGNUS FRUITLANDI		
2 1/2-in. pots	.17	
EUONYMUS MICROPHYLLA		
PULCHELLA (dwarf)		
2 1/2-in. pots	.16	
2 1/2-in. pots	.17	
6x8-in. TTT, field-grown	.30	
8x10-in. TTT, field-grown	.40	
EUONYMUS PATENS, large leaf		
2 1/2-in. pots	.16	
2 1/2-in. pots	.17	
EUONYMUS RADICANS ERECTUS		
2 1/2-in. pots	.16	
EUONYMUS RADICANS VEGETUS		
2 1/2-in. pots	.16	
2 1/2-in. pots	.17	
GARDENIA FORTUNEI		
2 1/2-in. pots	.16	
2 1/2-in. pots	.17	
GARDENIA RADICANS		
2 1/2-in. pots	.16	

(Continued in next column)

(Continued from previous column)

ILEX CRENATA HETZI		
2 1/2-in. pots	.20	
ILEX CORNUTA BURFORDI		
6x8-in. transplants	.12	
8x12-in. transplants	.15	
2 1/2-in. pots	.16	
2 1/2-in. pots	.17	
3-in. pots	.25	
ILEX CORNUTA FEMINA		
2 1/2-in. pots	.18	
2 1/2-in. pots	.20	
3-in. pots	.25	
ILEX CORNUTA, seedlings		
2 1/2-in. pots	.16	
2 1/2-in. pots	.17	
2 1/2-in. pots	.18	
ILEX OPACA EAST PALATKA		
2 1/2-in. pots	.18	
2 1/2-in. pots	.20	
ILEX OPACA FEMINA		
2 1/2-in. pots	.20	
ILICUM ANISATUM		
2 1/2-in. pots	.18	
2 1/2-in. pots	.20	
JASMINUM FLORIDUM		
Rooted cuttings	.10	
2 1/2-in. pots	.16	
LAUROCERASUS CAROLINIANA		
(Cherry Laurel)		
2 1/2-in. pots	.12	
2 1/2-in. pots	.15	
LIGUSTRUM JAPONICUM		
4x6-in. seedlings	.05	
2 1/2-in. pots	.15	
MAGNOLIA GRANDIFLORA		
2 1/2-in. pots	.16	
MAHONIA BEALEI		
2 1/2-in. pots	.20	
3-in. pots	.25	
NANDINA DOMESTICA		
3x4-in. seedlings	.03	
2 1/2-in. pots	.10	
2 1/2-in. pots	.12	
OSMANTHUS AQUIFOLIUM		
2 1/2-in. pots	.18	
2 1/2-in. pots	.20	
PHOTINIA SERRULATA		
2 1/2-in. pots	.20	
2 1/2-in. pots	.22 1/2	
PITTOSPORUM TIBIA		
2 1/2-in. pots	.16	
PODOCARPUS MACROPHYLLA		
2 1/2-in. pots	.16	
2 1/2-in. pots	.17	
PYRACANTHA BELLI		
2 1/2-in. pots	.18	
PYRACANTHA COCCINEA LALANDI		
2 1/2-in. pots	.16	
2 1/2-in. pots	.18	
TEUCRIUM CHAMAEDEPS		
(Dwarf perennial for borders)		
2 1/2-in. pots	.15	
6x8-in. TTT, field-grown	.25	
ACER PALMATUM		
ATROPURPUREUM		
2 1/2-in. pots	.20	
2 1/2-in. pots	.25	
3-in. pots	.35	
BERBERIS THUNBERGI		
ATROPURPUREUM		
2 1/2-in. pots	.16	
CORNUS FLORIDA		
6x12-in. seedlings	.04	
2 1/2-in. pots	.15	
2 1/2-in. pots	.16	
LONICERA FLAMING BEAUTY		
2 1/2-in. pots	.15	
MAGNOLIA SOULANGEANA		
2 1/2-in. pots	.30	
MAGNOLIA SOULANGEANA		
ALBA SUPERBA		
2 1/2-in. pots	.30	
MAGNOLIA SOULANGEANA		
AMABILIS		
2 1/2-in. pots	.30	
MAGNOLIA SOULANGEANA NIGRA		
2 1/2-in. pots	.30	
MAGNOLIA STELLATA		
2 1/2-in. pots	.35	
SPECIAL NOTICE: ITEMS MARKED BY ASTERISK (*) DELIVERY LATE SPRING. ALL ITEMS NOT SO MARKED READY FOR IMMEDIATE SHIPMENTS OR LATER TO SUIT CUSTOMERS' REQUIREMENTS. T. G. OWEN & SON, INC. Columbus, Miss.		

LINING-OUT STOCK

	Per 100	Per 1000
Ilex glabra, heavy, 2-yr.	\$40.00	\$350.00
Ilex rotundifolia, strong 2-yr.	40.00	350.00
transplants, 6 to 9 ins.		
Viburnum carlesii, 2-yr.	30.00	250.00
seedlings, 8 to 12 ins.		
Strong 4-yr. transplants, 15 to 18 ins., branched, field rows, suitable for mail order	75.00	600.00

C. HOOGEENDOORN

Turner Rd. Newport, R. I.

FINER LINERS

OF ORNAMENTAL ARISTOCRATS
The best is always a bargain. Our liners
are FINER LINERS because of our genera-
tions of experience. Let us send you our new
spring, 1957 catalog which lists seeds to field-
grown transplants and specimen ornamentals.
Come see us if you can.
JOHN VERHALEN & SON, INC.
Phone FOXcroft 9-5211
Neshanic Station, N. J.

LINING-OUT STOCK

Cutting-grown transplants.

	6 to 8 ins.	8-12	12-18
Elaeagnus pungens	\$0.12 1/2	\$0.15	\$0.17 1/2
Elaeagnus fruitlandi	.12 1/2	.15	.17 1/2
Euonymus patens	.10	.12 1/2	.15
Feljoa sellowiana	.10	.12 1/2	.15
Gardenia florida	.10	.12 1/2	.15
Gardenia fortunei	.10	.12 1/2	.15
Gardenia Hadley	.10	.12 1/2	.15
Gardenia radicans	.10	.12 1/2	.15
Gardenia veitchii	.10	.12 1/2	.15
Ilex cornuta burfordi	.10	.12 1/2	.15
Ilex cornuta femina	.10	.12 1/2	.15
Ilex microphylla	.10	.12 1/2	.15
Ilex rotundifolia	.12 1/2	.15	.17 1/2
Jasminum floridum	.10	.12 1/2	.15
Jasminum primulinum	.10	.12 1/2	.15
Ligustrum lucidum	.10	.12 1/2	.15
Ligustrum repandens	.10	.12 1/2	.15
Magnolia fuscata	.12 1/2	.15	.17 1/2
Photinia glabra	.10	.12 1/2	.15
Pittosporum	.12 1/2	.15	.17 1/2
Pyracantha formosana	.10	.12 1/2	.15
Viburnum			
odoratissimum	.10	.12 1/2	.15
Podocarpus sinensis	.12 1/2	.15	.17 1/2

CAMELLIA SASANQUA

LINING-OUT SIZES

	6 to 8 ins.	8-12	12-18	18-24
Annette	\$0.15	\$0.17 1/2	\$0.20	\$0.21
Cinderella	.15	.17 1/2	.20	.21
Cleopatra	.15	.17 1/2	.20	.21
Mine-no-yuki	.15	.17 1/2	.20	.21
Rosea	.15	.17 1/2	.20	.21
Setsubukka	.15	.17 1/2	.20	.21
Shishifukujin	.15	.17 1/2	.20	.21
Daydream	.15	.17 1/2	.20	.21
Papavera	.15	.17 1/2	.20	.21
Oleifera	.15	.17 1/2	.20	.21
Hime-gumo	.15	.17 1/2	.20	.21
Beni Kantsubaki	.25	.35		
Pink Snow	.25	.35		

SEMME'S NURSERIES, INC.

Semmes, Ala.

LINERS, ALL IN 2 1/2-IN. POTS

Baker Arborvitae	.20
Bluepearl Arborvitae	.20
Goldcone Arborvitae	.20
Bonita Arborvitae	.20
Goldspire Arborvitae	.20
Excelsa Arborvitae	.20
Hetz Juniper	.15
Irish Juniper	.15
Kiyono Juniper	.15
Procurbens Juniper	.20
Sylvestris Juniper	.15
Vase-shape Juniper	.15
Cornuta Holly	.15
Burford Holly	.15
Japanese Holly	.15
Ilex crenata bullata	.15
Yaupon Holly (cuttings)	.15
Boxwood, sempervirens	.15
Euonymus pectus	.15
Florida Jasmine	.15
Parker's Jasmine	.20
Nandinas	.15
Golden Honeysuckle	.15
Purple Honeysuckle	.15
Yunnan Honeysuckle	.15
Red Pyracantha (extra large)	.15
Orange Pyracantha	.15
Mimosas, seedlings, br.	\$50.00 per 1000.

Less 10 per cent cash discount.

Each plant is shipped in paper cup, packed
100 per carton; 20 lbs. per 100. No charge for
packing.

VERHALEN NURSERY CO.

Scottsville, Tex.

LINING-OUT STOCK

	Each	Per 1000
ACER saecharinum		
1-yr. layers, 3 to 4 ft.	\$0.50	
1-yr. layers, 4 to 5 ft.	.55	
transpl., layers, 5 to 6 ft.	.75	
ACER Faasens Black		
1-yr. whips, 4 to 5 ft.	1.00	
1-yr. whips, 4 to 6 ft.	1.25	
1-yr. whips, 6 to 7 ft.	1.40	
ROBINIA bessoniana, 1-yr. grafts,		
2 to 3 ft.	.40	
(Thornless Honey Locust),		
2-yr. grafts, 3 to 4 ft.	.75	
2-yr. grafts, 5 to 6 ft.	.85	
TILIA platyphyllos, layers, 2 to 4 ft.		
(European Linden), transpl., layers,		
4 to 5 ft.	.50	
F.O.B. New Jersey. Packing at cost.		
per cent discount for cash with order.		
take 1000 each. Minimum order \$100.00.		

HOLLAND NURSERY PRODUCTS

P. O. Box 339, Madison Square Station

New York 10, N. Y.

EXTRA FINE LINERS

	Per 100	Per 1000
Euonymus radicans, 2-yr.		
2 1/2-in. pots	\$20.00	\$150.00
Euonymus radicans coloratus,		
2-yr., 2 1/2-in. pots	20.00	175.00
Spiraea Anthony Waterer,		
2 1/2-in. pots	15.00	125.00
Honey Locust, thornless, 2-yr. seedlings		
9 to 12 ins.	2.50	20.00
12 to 18 ins.	4.50	40.00
18 to 24 ins.	5.50	50.00
Thuja orientalis, 3-yr.		
transplants	10.00	75.00

BORK NURSERY

Onarga, Ill.

Phone AM 8-7267

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American Holly, grown from cuttings, sex guaranteed, female or male, bed-grown, 1-yr., old, 4 to 6 ins., 17½¢; 6 to 10 ins., 25¢.
Eucymnus alatus compactus, large, heavily rooted cuttings, rooted in soil since June 1956, 5c.
Mahonia bealei, strong 1-yr. seedlings, growing in outside beds. Just right for potting, 5c.
 Leather-leaved *Viburnum*, cuttings rooted outside in soil since June 1956, 10c.
 Pfitzer Juniper, rooted cuttings, 1-yr.-old, sheared 3 or 4 times to make a stubby 6 or 7-in. plant of real quality, 10c.
 Mentor Barberry, rooted cuttings, beautiful roots, in soil since July 1956, 7c.
Retundifolia Holly, extra large rooted cuttings, in outside beds since July 1956, 7c.
Jasminum, floridum and nudiflorum, bed-grown liners, 10c.
 Write for complete list.
 phytotektor, Highway 64, Winchester, Tenn.

LINING-OUT STOCK

	100	1000
Acer platanoides, 1-yr. seedlings, \$ 7.00	\$ 60.00	
Zeal hindegeri, 2-yr., T beds, 4 to 6 ins.	50.00	450.00
Cydonia japonica, 1-yr. seedlings, 4.50	35.00	
Cydonia japonica, 2-yr., T, fr., 10.00	90.00	
Gleditsia triacanthos, 1-yr. seedlings, 7.50	70.00	
Koeleruteria paniculata, 1-yr. seedlings, 7.50	70.00	
Viburnum dilatatum, 2-yr., T, fr. 6 to 9 ins.	25.00	200.00
Zelkova serrata (suba), 1-yr., S, 6 to 9 ins. (not subject to Dutch Elm disease)	15.00	120.00

Samples on request
BOULEVARD NURSERIES
 Newport, R. I.

LINING-OUT STOCK

	Per 100	Per 1000
Taxus canadensis, 1-yr., S, 5.00	\$40.00	
2-yr., S, 6.00	50.00	
Pot-grown grafts, shipping now, Per 100		
Acer polymorphum atropurpureum	\$75.00	
Betula laciniata (Cutleaf Birch)	60.00	
Carpinus betulus fastigiata	60.00	
Cornus florida rubra	50.00	
Cornus florida rubra Prosser	65.00	
Cornus florida welchii var.	65.00	
Hamamelis mollis	50.00	
Pinus cembroides	60.00	
Retinospora obtusa gracilis	50.00	
Viburnum carlesii	50.00	
Viburnum juddi	50.00	
Viburnum burkwoodii	50.00	

Special prices on large quantities.
VERKADE'S NURSERIES, Wayne, N. J.

LINING-OUT STOCK

	Per 100
Spiraea Anthony Waterer, transplants, 6 to 8 ins.	\$15.00
Viburnum lantana, 2-yr., 6 to 8 ins.	10.00

JOHN BOS NURSERY, CLYDE, O.

MAGNOLIAS

ORIENTAL MAGNOLIAS
Soulangeana and *soulangeana nigra*
 Bed-grown liners

	Per 100	Per 1000
8 to 12 ins.	\$35.00	\$300.00
12 to 18 ins.	40.00	350.00
18 to 24 ins.	45.00	400.00

Field-grown finished plants

	Each
18 to 24 ins., bare-root	\$1.00
2 to 3 ft., bare-root	1.25
3 to 4 ft., bare-root	2.00

We advise shipment before February 1.
WELCH BROS. NURSERY
 Wilmer, Ala.

MAGNOLIAS

Liners: *Nigra*, *soulangeana*, *illiflora*.
 8 to 12 ins. \$25.00 per 100
 12 to 18 ins. 30.00 per 100
 B&B or bare-root: *Nigra*, *soulangeana*.
 2 to 3 ft. \$1.30 each
 3 to 4 ft. 1.60 each
 No extra charge for packing liners and bare-root plants. Add \$1.00 per plant for B&B plants that have to be crated for shipping.
 Write us about truckload lots F.O.B. our nurseries.
FLOWERWOOD NURSERY, INC.
 Loxley, Ala.

MAGNOLIA GRANDIFLORA

2½-in. pots, potted last spring, 4 to 8 ins. high, \$15.00 per 100. Shipped in clay pots unless instructed to remove. \$140.00 per 1000 here, you pick up. In gallon cans, 18 ins. to 3 ft. high, not heavy in leaf, excellent item for large cans or field, 60c each; no shipping this item. Many sizes in field. B&B. Interested in outstanding specimen trees. Cash and no charge for packing.
HARWELL NURSERY, VAN BUREN, ARK.

MAPLES

COLLECTED ACER
 RUBRUM AND SACCHARINUM,
 from whips to 4-in. caliper.
CURTIS NURSERIES, INC.
 Callicoon, N. Y.

NORWAY MAPLE
 Straight trunks. Fine heads. Very fibrous roots.
 6 to 8 ft. 10-48 50-250
 8 to 10 ft., 1 to 1½-in. 4.40 3.50
 9 to 11 ft., 1½ to 1¾-in. 6.00 5.00
 10 to 12 ft., 1¾ to 1½-in. 8.50 7.00
 11 to 13 ft., 1½ to 2-in. 11.00 9.00

PRINCETON NURSERIES

Princeton, N. J.
JAPANESE RED MAPLE
 The best dark red seedlings.
 2-yr. transplants for field planting.
 Sturdy, well-branched transplants of 3 and 4-yr. pots, for immediate resale.
 Specializing in Japanese Maples.

HUBBS NURSERIES

Route 130 Riverton, N. J.

500 SILVER MAPLE
 Nursery-grown transplants, 6 to 9 ft., \$10.00 per 100, \$80.00 per 1000. Trees are well-rooted, branched and straight, excellent for lining-out or sales yard.

Free packing, 25 at 100 rate.
AMMON NURSERY
 Phone Atlantic 3-1607 Florence, Ky.

PACHYSANDRAS

PACHYSANDRAS
 Out of 2-in. pots, \$12.00 per 100, \$100.00 per 1000. F.O.B. Elizabeth, N. J.
DELAWARE VALLEY NURSERY
 948 N. Broad St. Elizabeth, N. J.

PACHYSANDRAS
 Strong rooted cuttings, \$4.25 per 100, \$40.00 per 1000.

DUNWOODIE NURSERIES
 6 Smart Ave. Yonkers, N. Y.

PACHYSANDRA TERMINALIS
 Strong 1-yr., field-grown, \$65.00 per 1000.
HILLCREST GREENHOUSES, Franklin, Pa.

PEONIES

PEONIES
 Whole 1-yr. field clumps, not divided; at least 3 eyes, in the following varieties:
 \$35.00 per 100, \$325.00 per 1000.
Festiva maxima Mons. Jules Elie
Baroness Schroeder Duchesse de Nemours
Sarah Bernhard Albert Crousse
Karl Rosenfeld Reine Hortense
Marie Lemoine Adolph Rousseau
Lady Alex. Duff Felix Crousse
Gen. McMahon Edulis superba
VERKADE'S NURSERIES, Wayne, N. J.

PIERIS

PIERIS JAPONICA
 (Andromeda)
 Per 100 Per 1000
 3-yr. liners, TTT \$40.00 \$350.00
 2-yr. peat bed, 6 to 8 ins., TT. 30.00 250.00
 2-yr. peat bed, 4 to 6 ins., TT. 20.00 175.00
 1-yr., branched, T. 10.00 90.00

ECKHART NURSERIES
 16 Toppa Blvd. Newport, R. I.

PIERIS JAPONICA (ANDROMEDA)
 Per 100 Per 1000
 1-yr., T, 2 to 3 ins. \$8.00 \$75.00
 Seedlings, 1 to 2 in. 6.00 50.00

PLANE VIEW NURSERY
 West Rd. Newport, R. I.

PRIVET

GENUINE AMUR RIVER NORTH PRIVET CUTTINGS
 Wood cut from proved "mother blocks," not just mediocre trimmings from old hedges. All hand sorted; same high grade as we plant. Our Privet cuttings grow into pretty dollars for you. Lots of 5000 or more, \$3.00 per 1000. Cash, packing free. Order immediately, shipped when wanted.
ALTA VISTA NURSERIES
 R. F. D. 3 Davenport, Ia.

RHODODENDRONS

RHODODENDRONS
 Each
 1-yr. grafts, well-rooted, 100 \$0.75
 1-yr. grafts, well-rooted, 150 up65
 1-yr. grafts, well-rooted, 250 up60
 1-yr. grafts, well-rooted, 500 up58
 On orders of 500 and up, free packing.
 3-yr., well-budded, 12 to 15 ins. 2.50
 3-yr., well-budded, 15 to 18 ins. 2.60

F.O.B. New Jersey. Packing at cost.
 3 per cent for cash with order.
 Ask for our Rhododendron list with over 175 varieties or order by color.

All plants imported by plane.
HOLLAND NURSERY PRODUCTS
 P. O. Box 339, Madison Square Station
 New York 10, N. Y.

HYBRID RHODODENDRONS

Landscape sizes.
 Different colors.
PARMENTIER'S ROSES
 Grady St. Bayport, L. I., N. Y.
 Phone Bayport 8-0811

RHODODENDRONS

Lining-out stock for spring 1957 delivery
 Hybrids, hardy varieties, 2-yr. grafts
 Reestablished plants, with ball.
 Japanese beetle certified.

America, red
Caractacus, purplish crimson
Catawbiense album, white
Catawbiense grandiflorum, lilac
 Charles Dickens, red
 Dr. H. C. Dresselhuys, crimson
 Edward S. Rand, red
 English roseum, rose
 Everestianum, rosy lilac
 F. D. Godman, magenta-red
 Ignatius Sargent, rosy crimson
 Lee's Dark Purple, deep purple
 Nova Zembla, red
Roseum elegans, rose-tinted lilac
 Vanderbrocke, crimson
 Vanweerden Poelman, crimson.

\$130.00 per 100, \$600.00 per 500.
 \$1100.00 per 1000.
 F.O.B. Red Bank, N. J.
J. BLAAUW & CO.
 (Wholesale Nurseries)
 Lincroft, N. J.
 Mailing addr.: P. O. Box 573, Red Bank, N. J.
 Phone Red Bank 6-2249

RHODODENDRONS

For immediate shipment. Unnamed hybrids of hardy ponticum-catawbiense parentage. Good foliage. For understock, growing on or over the counter sales, with firm light-weight ball, twice transplanted, bed-grown, 4 to 6 ins. \$0.20 each
 6 to 8 ins.25 each
 50 plants per crate. Order by crate only. Lightweight, expert frost-proofed crating free. Cash with order.

RICHARD P. RESSEL NURSERY
 Mulino, Ore.

RHODODENDRON MAXIMUM
 Nursery-grown and collected, 2 to 7 ft. high. Well-shaped, symmetrical plants.
CURTIS NURSERIES, INC.
 Callicoon, N. Y.

ROSEBUSHES

ROSEBUSHES
 Two-year, field-grown Rosebushes for immediate or later shipment. All plants state inspected, dug and shipped fresh from our own fields. Tied in bundles of 10 of a grade and variety. Terms: Cash, or 25 per cent cash, balance C.O.D. Packing free.

	100 or more	500 or more
No. 1 grade, .35c ea.	No. 1 grade, .32c ea.	
No. 1½ grade, .27c ea.	No. 1½ grade, .25c ea.	
No. 2 grade, .20c ea.	No. 2 grade, .18c ea.	

RED
 *Better Times
 E. G. Hill
 Night
 Red Radiance
 Ami Quinard
 *Etoile de Hollande
 Syracuse
 *Poinsettia
 *Red Columbia
 *Crimson Glory
 Chas. K. Douglas
 Grenoble
 PINK
 Pink Radiance
 Mrs. Chas. Bell
 Editor McFarland
 Shell Radiance
 *Paul Neyron
 *Columbia
 *Blanchif
 *The Doctor
 WHITE
 Frau Karl Druschki
 Caledonia
 Snowbird
 White American
 Beauty
 K. A. Victoria
 YELLOW
 Golden Charm
 *Sour Theres
 Yellow Talisman
 Luxembourg
 Eclipse
 Golden Dawn

POLYANTHA AND FLORIBUNDA

Ideal
 Golden Salmon
 Elise Poulsen
 Red Ripples
 Floradora
 *Eblouissant
 Katherina Zeimet
 Mrs. R. M. Finch
 Lafayette
CLIMBERS
 Blaze
 Caledonia
 Red Radiance
 Pink Radiance
 Paul's Scarlet
 Regular Talisman
 White American
 Beauty
 Poinsettia
 Red Talisman
 Golden Charm
 Mary Hart
 Yellow Talisman
 Marechal Niel
 K. A. Victoria
 Cecile Brunner
 Mrs. P. S. DuPont

*Denotes Nos. 1½ and 2 only.
WELLS BROS. NURSERY
 J. J. Wells, Owner
 Box 625 Phone 12F4W Lindale, Tex.

THE SEASON'S BEST DEAL! SEE FOR YOURSELF BY

SENDING FOR 1957 TRADE LIST. WE STILL OFFER A CHOICE OF BARE-ROOT AND PREPACKAGED PATENT AND STANDARD ROSES. NEW LONDON ROSES "The Rose Nursery"

P. O. Box 876 Overton, Tex.

BE SURE TO BUY GOOD ROSES
 Krider's is a dependable source of high-quality, hardy, field-grown Roses at reasonable prices. Write for complete list of standard and patented varieties.
 Order now for immediate or later delivery.
THE KRIDER NURSERY, INC.
 Home of Good Roses
 Middlebury, Ind.

ROSEBUSHES—Continued

MULTIFLORA ROSE FOR LIVING FENCES		
Caliber	Approximate height	Price
2 to 3 mm.	8 to 15 ins.	\$12.50
3 to 5 mm.	12 to 15 ins.	19.50
3 to 8 mm.	12 to 24 ins.	22.50
5 to 12 mm.	18 to 36 ins.	38.50

MULTIFLORA ROSE UNDERSTOCK
Straight trunked seedlings grown especially for understock. Nematode free. Externally graded. Pronounced the best by many users. Limited surplus over and above our needs for regular customers.

4 to 6 mm., \$29.50; 2 to 4 mm., \$18.50.
10 per cent discount on lots of 10,000; 20 per cent discount on lots of 100,000.

The above prices are F.O.B. Griggsville, Ill., nursery.
All tops cut back to 10 ins. at shipping unless otherwise requested.

Our storage facilities are the best. Order now for delivery this winter or spring.

FARM LANDSCAPE CO.
Route 3 Urbana, Ill.

ROSA MULTIFLORA HEDGING		
Extra heavy, semi-thorny, cutting-grown. These cutting-grown plants are much superior to any other multiflora grown. Full root system, heavy tops, mildew resistant. Write for quantity prices.		
Cut back to	Per 1000	
12 to 18 ins.	\$22.50	
18 to 24 ins.	25.00	
24 to 30 ins.	50.00	

THORNLESS ROSA, MULTIFLORA

JAPANESE		
De-eyed cuttings for budding stock. Mildew resistant, no side roots.		
1,000 to 4,000	\$32.00	
5,000 to 9,000	30.00	
10,000 to 25,000	29.00	

All prices F.O.B. Painesville, O.
No packing charge.
Write for trade list.
FELIX ZAMPINI & SONS
Rose Growers & Nurserymen
Painesville, O.
Phone Elmwood 4-8054

2-YEAR, FIELD-GROWN BUSHES
IRRIGATED, CULTIVATED, FERTILIZED AND DUSTED REGULARLY.
Book your needs now as good bushes will be scarce.

BARE-ROOT, F.O.B. TYLER.		
100 to 499	500 to 1000	
No. 1, 35c each	No. 1, 32 1/2c each	
No. 1 1/2, 27c each	No. 1 1/2, 25c each	
No. 2, 20c each	No. 2, 18c each	

Individually wrapped in attractive bags, picture label, paraffin dipped, 10c per bush extra. Package of 3 No. 2, 75c per package. No packing charge on 100 or more plants. Less than 100, add 5c per plant.

MALONE NURSERY
502 S. Broadway Tyler, Tex.

ROSEBUSHES
2-YEAR PLANTS.
Grown, graded and packed to perfection. 246 varieties and 12 different types to choose from.

WRITE TODAY FOR PRICES AND BOOK YOUR REQUIREMENTS NOW!

ROSEMONT NURSERIES
D. L. Thompson, Owner
Dept. AN
Tyler, Tex.

ARP ROSES

The kind real gardeners want.
Arp-grown and Arp-packed by machine for full root and uniformity. Beautiful display packages, direct-to-garden mail order or bare-root for landscape. All-America winners and 130 other popular varieties. Write for price list and place your order now. Service to nurseries for 35 years.

ARP NURSERY CO., WHOLESALE GROWER
Box 3338-A Tyler, Tex.

2-YEAR FIELD-GROWN ROSES

Quality at its best.
Prepaid delivery by roadway express or motor freight. 1/2 freight allowed on rail shipments. We will have some truck deliveries to N. Y., Ill., Mich. and surrounding territories, starting about January 15. Write for complete listing and particulars.

ROSELAWN NURSERIES
Box 295 Winnboro, Tex.

ROSEBUSHES

A WIDE ASSORTMENT OF REASONABLY PRICED, HIGH-QUALITY ROSEBUSHES, WITH FAST, COURTEOUS SERVICE. IS WHAT YOU GET AT

MARTIN'S ROSE NURSERY
P. O. Box 155 Arp, Tex.

Phone UL 92191.
(A copy of our 1956-57 trade list will be mailed to you upon request.)

2-YR.-OLD, FIELD-GROWN ROSEBUSHES

Hybrid Teas, floribundas, polyanthas and climbers.

Variety list free on request.

No. 1, 30c each; No. 1 1/2, 25c each; No. 2, 20c each.

LINDALE NURSERY
Box 141 Lindale, Tex.

Phone 18F2W

2-YEAR ROSEBUSHES, QUALITY PLANTS
70 varieties. Budded on multiflora. No. 1, \$35.00; No. 1 1/2, \$27.00; No. 2, \$20.00 per 100. Also 30 patented varieties. Send for list.
P. O. TATE NURSERY, R. 3, TYLER, TEX.

SEEDS

CLEAN SEEDS

Red Cedar, Platt type	\$4.50 lb.
Rosa multiflora	3.00 lb.
Lilac, common	4.00 lb.
Honeysuckle, Tatarian	3.50 lb.

FORESTRY SEED SERVICE

Cuba, Kan.

CHINESE ELM SEED

1956 crop ready for immediate delivery.

1957 crop ready in May.

1 to 5 lbs. \$1.40 per lb.

6 to 10 lbs. 1.25 per lb.

Over 10 lbs. 1.10 per lb.

This seed tests very well.

A high percentage will germinate.

MCCANCE NURSERIES

Route 2 North Platte, Neb.

600 LBS. FINE NANDINA SEED

From heavy bearing specimen plants.

\$1.00 per lb.

E. F. DUBOSE NURSERY

Huntsville, Ala.

SHRUBS AND TREES

POTTED GRAFTS, 1-YR.

	Per 100
Acer palmatum atropurpureum	\$75.00
Fagus sylvatica pendula	75.00
Fagus sylvatica fastigiata	75.00
Fagus sylvatica rivera	75.00

ROOTED CUTTINGS, 1-YR. BEDDED

	Per 100 Per 1000
Buxus sempervirens, 4 to 6 ins.	\$10.00 \$ 90.00
Box bullata, 4 to 6 ins.	10.00 90.00
Box crenata, 5 to 8 ins.	10.00 90.00
Box rotundifolia, 5 to 8 ins.	12.00 100.00
Juniper, Andorra, 4 to 8 ins.	10.00 90.00
Juniper, hibernica, 5 to 8 ins.	10.00 90.00
Juniper, Pfitzer, 4 to 6 ins.	12.00 100.00
Box glabra, 4 to 6 ins.	10.00 90.00
Pachysandra	4.00 35.00

Retinospora plumosa aurea.

6 to 8 ins. 10.00 90.00

Retinospora plumosa, 6 to 8 ins. 10.00 90.00

Taxus brevifolia, 4 to 6 ins. 10.00 90.00

Taxus capitata, tips, 6 to 8 ins. 15.00 125.00

Taxus compacta, 4 to 6 ins. 15.00 125.00

Taxus cuspidata, 4 to 6 ins. 10.00 90.00

Taxus hatfieldi, 4 to 6 ins. 10.00 90.00

Taxus hispida, 4 to 6 ins. 10.00 90.00

Taxus ovata, 4 to 6 ins. 15.00 125.00

Thuja globosa, 5 to 8 ins. 10.00 90.00

Thuja vancouveriana, 5 to 8 ins. 10.00 90.00

1-YR. SEEDLINGS

	Per 100 Per 1000
Cornus florida	\$5.00 \$40.00
Taxus capitata	5.00 40.00
Taxus capitata, transplants	6.00 50.00

2-YR. SEEDLINGS

	Per 100 Per 1000
Balsam Fir, 3 to 5 ins.	\$4.00 \$35.00
Picea excelsa, 4 to 6 ins.	3.50 25.00
Picea pungens glauca, 3 to 5 ins.	4.00 35.00
Picea White Spruce, 4 to 6 ins.	3.50 25.00
Pinus strobus, 4 to 6 ins.	3.50 25.00
Pinus sylvestris, 4 to 6 ins.	3.50 25.00
Thuja occidentalis, 4 to 6 ins.	3.00 20.00
Thuja orientalis, 4 to 8 ins.	3.50 30.00
Tsuga canadensis, 3 to 4 ins.	6.00 50.00
Taxus capitata, 4 to 6 ins.	7.00 60.00

In large quantity, special price.

3-YR. SEEDLINGS, TRANSPLANTED

	Per 100 Per 1000
Taxus capitata, 4 to 8 ins.	\$12.00 \$100.00
Tsuga canadensis, 4 to 7 ins.	8.00 70.00
Douglas Fir, 5 to 8 ins.	6.00 50.00
Euonymus alatus	6.00 45.00

AZALEAS, 3-YR. TRANSPLANTS

Per 100 \$40.00

4-YR. TRANSPLANTS

	Per 100 Per 1000
Douglas Fir, 6 to 12 ins.	\$10.00 90.00
Picea excelsa, 6 to 8 ins.	6.00 50.00
Picea pungens glauca, 4 to 8 ins.	7.00 60.00
Picea White Spruce, 5 to 8 ins.	6.00 50.00
Picea rubens, 6 to 8 ins.	12.00 100.00
Tsuga canadensis, 5 to 8 ins.	10.00 95.00
Tsuga canadensis, 8 to 10 ins.	15.00 140.00
Tsuga caroliniana, 6 to 8 ins.	10.00 90.00
Thuja occidentalis, 6 to 10 ins.	10.00 90.00

ROOTED CUTTINGS TRANSPLANTED

IN FLATS Per 100 Per 1000

Azalea Hino-Crimson \$12.00 \$100.00

Azalea Hino-degiri 12.00 100.00

Euonymus japonicus 12.00 100.00

VAN DINE NURSERY

Berdan Ave. Preknack, Paterson, N. J.

CHINESE ELM

	Per 100
4 to 5 ft.	\$15.00
5 to 6 ft.	20.00
6 to 8 ft.	45.00
8 to 10 ft.	65.00

Will trade Burkett and Western Schley

Pecan trees for liners in C. Myrtle, Pyra-

canthas, Nandinas, A. Cypress, Italian Cy-

press, C. Laurel and Figs.

WASHAM NURSERY, SWEETWATER, TEX.

AMERICAN NURSERYMAN

PINK DOGWOOD

1, 2 and 3 yrs. old.

All sizes.

SUPER RED DOGWOOD

12 to 18 ins., 3 to 4 ft.

18 to 24 ins., 4 to 5 ft.

24 to 30 ins., 5 to 6 ft.

30 to 36 ins.

WHITE DOGWOOD

3 to 4 ft., 5 to 6 ft.

4 to 5 ft., 6 to 7 ft.

BROWN TURKEY FIG

12 to 18 ins., 18 to 24 ins.

2 to 3 ft.

EVERGREENS

SHADE TREES

FRUIT TREES

LET US QUOTE YOU OUR PRICES

IKE HAWKERSMITH NURSERY

Winchester, Tenn.

SHRUBS

500 Honeysuckle, fragrantissima.

700 Honeysuckle, zabeli, 6 to 9 ins. \$0.85

1000 Honeysuckle, zabeli, 12 to 15 ins.85

950 Honeysuckle, zabeli, 15 to 18 ins.85

300 Lilacs, purple; sdigs., 6 to 9 ins.85

750 Lilacs, French, 1-yr. grafts.

250 Privet, Golden Veary, 8 to 10 ins.85

225 Privet, Golden Veary, 10 to 12 ins.85

3250 Privet, Polish, 6 to 8 ins.85

450 Spiraea freebeli, 8 to 10 ins.85

550 Spiraea Vanhouttei, 9 to 12 ins.85

350 Spiraea Anthony Waterer, 6 to 8 ins.85

HENRY NURSERIES, HENRY, ILL.

EVERGREENS, WHOLESALERS

A wide selection of Evergreen seedlings

and transplants, also hardwoods, shade trees,

ornamentals, shrubs and flowering trees. Our

selected seed, with good heredity and scientific

culture, assures healthy trees with heavy

roots for rapid growth.

Musser offers quality trees at a price made

possible through large quantity production.

Our cold storage permits late shipments.

No charge for packing and boxing. Ask for

complete catalog and wholesale planting lists.

Our ad, which appears on page 28 of this

issue, shows a partial list of seedlings and

transplants.

MUSSEY FORESTS

Box 16-AC Indians, Pa.

NURSERY-GROWN SEEDLINGS

Red Oak (Quercus borealis maxima), 6 to

14 ins.

Pin Oak (Quercus palustris), 4 to 10 ins.

White Ash (Fraxinus americana), 6 to

14 ins.

Red or Sweet Gum (Liquidambar styraci-

flua), 4 to 10 ins.

Oriental Arborvitae (Thuja orientalis), 6 to

12 ins.

\$4.00 per 100, \$35.00 per 1000.

Rosa multiflora, 6 to 6 to 10 ins.

\$15.00; 10 to 15 ins., \$25.00.

STANLEY J. HENSLEY, HAMLET, IND.

Forester-Nurseryman

CHINESE ELM LINERS

2 to 3 ft. \$ 4.00 per 100

3 to 4 ft. 6.00 per 100

4 to 5 ft. 10.00 per 100

5 to 6 ft. 30 each

HEAVY TRANSPLANTS

6 to 7 ft., 1/2 to 3/4-in. \$0.50 each

7 to 8 ft., 5/8 to 1-in.80 each

8 to 10 ft., 1 to 1 1/2-in. 1.25 each

10 to 11 ft., 1 1/2 to 2-in. 2.00 each

WEITZEL'S NURSERY, North Platte, Neb.

FLOWERING CRABS

40 varieties, best of the old and newer

varieties. 1-yr. whips and branched. Also

3-yr., once transplanted, 6 to 8 ft. Descriptive

booklet available.

THUNDERCLOUD PURPLE-LEAVED PLUM

1-yr., well-branched, sizes to 6 ft. and

over.

SIMPSON ORCHARD CO.

U. S. 50 E. Vincennes, Ind.

PHILADELPHUS AUREUS

Per 100 Per 1000

TAXUS

2-yr. old liners, transplanted, field-grown.
Certified nursery stock.
Ship beetle zone, outside beetle zone.
Hatfield
cuspidata capitata, rooted from leaders
cuspidata, spreading
Moomi, upright
Hicksi

Free packing:

\$40.00 per 100, \$550.00 per 1000.

LARRY'S NURSERIES, INC.

950 Reservoir Ave., Cranston, R. I.

TAXUS CAPITATA

Strong 2-yr. seedlings, seeds sown lightly,
plants grown with plenty of room in beds.
\$15.00 per 100, \$125.00 per 1000.
C. HOOGEBOORN NURSERIES
Newport, R. I.

VINCAS

VINCA MINOR

Hardy, strong field-grown clumps.
First-class stock.

	Per 100	Per 1000
10 to 20 leads.....	\$5.00	\$45.00
20 to 30 leads.....	7.50	69.00

J. A. WEDDINGTON & SON
4414 Holston Drive Knoxville, Tenn.
Phone Knoxville 3-4417

HARDY VINCA MINOR

Strong plants from field clumps.
Excellent foliage and roots.

First-class stock.

10 to 15 stems, \$9.50 per 100, prepaid,
\$50.00 per 1000; 5000 or more, \$75.00.
F.O.B. here. Prompt shipment.

PEEKSKILL NURSERIES

Shrub Oak, N. Y.

Hardy Myrtle (Vinca minor), plants with
20 leads or more and good roots, \$5.00 per
100, \$45.00 per 1000, Cash. Samuel I. Minder,
305 Euclid Ave., Lancaster, Pa.

MISCELLANEOUS

WALNUTS (GRAFTED)

Thomas, Early Thomas, Mintle, Edras,
Stabler, Ogden and Champion, 3 to 4 ft.,
1.50; 4 to 5 ft., \$1.85; 5 to 6 ft., \$2.10;
6 to 7 ft., \$2.35.

Discount for lots of 10 of one variety and
size, 10 per cent; 25, 25 per cent; 50, 35 per
cent; 100, 40 per cent.

CHERRIES, BUDDED

Montmorency (improved strain) and Early
Richmond, 11/16 to 1-in. caliper, good height,
95¢; 9/16 to 11/16-in. caliper, 80¢.

GRAPES

Concord, 1-yr. size, No. 1, \$7.50 per 100,
\$65.00 per 1000; 2-yr. size, No. 1, \$8.50 per
100, \$75.00 per 1000.

Fredonia and Niagara, 1-yr. size, No. 1,
\$3.50 per 100, \$35.00 per 1000; 2-yr. size, No.
1, \$11.50 per 100, \$100.00 per 1000.

Caco and Delaware, 1-yr. size, No. 1,
\$12.00 per 100, \$110.00 per 1000; 2-yr. size,
No. 1, \$13.00 per 100, \$120.00 per 1000.

MARTHA WASHINGTON ASPARAGUS
1-yr., \$2.00 per 100; 2-yr., \$3.00 per 100.

HEDGES (WELL-BRANCHED)

California Privet, 2 to 3 ft., \$9.00 per 100.
Amur River South Privet, 2 to 3 ft., \$8.00 per
100.

Amur River North Privet, 2 to 3 ft., \$9.00
per 100; 3 to 4 ft., \$11.00 per 100; 4 to 5
ft., \$12.00 per 100.

BENTON COUNTY NURSERY CO., INC.
Rogers, Ark.

Concord Grapes, 2-yr., No. 1...\$10.00 per 100
Cumberland Raspberry, No. 1... 5.00 per 100
Lucretia Dewberry, No. 1... 5.00 per 100
Lawton Blackberry, No. 1... 5.00 per 100
Thornless Boysenberry, No. 1... 5.00 per 100
Ozark Gooseberry, No. 1... 9.00 per 100
Mary Washington Asparagus,
2-yr., No. 1... 2.50 per 100
Basham Nursery, Mountaintop, Ark.

WANTED

WANTED

Will trade 5000 to 10,000 Spiraea Anthony
Waterer liners, 2 1/4-in. pots, for same amount
of Philadelphia virginialis liners.
BORK'S NURSERY, ONARGA, ILL.

SUPPLIES

BIRD FEEDERS

BIRD FEEDERS

Wild bird feeding stations and houses are
now big business. If located in a suburban
or rural area, you can share BIG profits.
Generous discounts, fast turnover, many re-
peat sales. Write on your letterhead for
catalog HR.

McHUTCHISON & CO., Ridgefield, N. J.
695 N. Grand Ave. Portland 14, Ore.
211 S. E. Belmont

FERTILIZERS

PETERS SPECIAL SOLUBLE
FERTILIZERS

20-20-20, the best general purpose feed
21-7-7 Azalea Acid (for hard-water sections)
21-7-7 Azalea Neutral (for normal water)
All above, \$6.50 per 25-lb. bag.

\$22.00 for 4 25-lb. bags.

PETERS SPECIAL UREAFORM

FERTILIZERS (NON-SOLUBLE)

13-6-6 Organic Special. Ureaform Nitrogen
and natural organica. A pot-plant special
dry feed. Non-soluble.

\$7.50 per 25-lb. bag.

\$23.00 for 4 25-lb. bags.

Du Pont Uramite, 55 per cent nitrogen from
ureaformaldehyde.

(\$12.00 per 50-lb. bag.)

All above material in F.O.B. Allentown.

ROBERT B. PETERS CO.
739 N. 7th St. Allentown, Pa.

9,500 Active Nurserymen

are in need of stock.

List your offerings in the

American Nurseryman Classified Section.

FLATS

MINNESOTA WHITE CEDAR FLATS

Order by No.	Wt.	Price
No. 1, 14x20x2 1/2	320	\$25.00
No. 2, 14x20x3 1/2	400	29.00
No. 3, 12x16x2 1/2	260	19.00
No. 4, 12x16x3 1/2	275	22.50
No. 5, 14x16x2 1/2	275	21.50
No. 6, 14x16x3 1/2	290	25.50
No. 7, 15x22x2 1/2	380	28.50
No. 8, 15x22x3 1/2	425	32.00
No. 9, 11 1/4x22 1/2x2 1/2	320	23.00
No. 10, 11 1/4x22 1/2x3 1/2	400	26.75
No. 11, 14x16x5	450	30.00
No. 12, 5x11x5	160	16.00
No. 13, 5x16x5	215	18.50
Plant boxes, 6x8 1/2x2 1/2	45	5.00

All other sizes quoted on request.
5 per cent discount on order of 1000 or
more.

The above measurements are inside. Bot-
toms and sides of cedar flats are 3/4-in. thick;
ends are 1/2-in. Plant boxes are thinner.

All material surfaced on one side.
Your name and address printed up to 3
lines in black ink, on one or both end pieces
at the following rates: Set-up charge, \$1.00,
plus 5¢ per piece for the first 1000 ends, 1/2¢
per end thereafter. Shipped knocked-down in
units of 25.

All shipments by truck unless otherwise
ordered. F.O.B. Cook, Minn. Attach check.
H. C. HILL & SONS, Cook, Minn.

REDWOOD FLATS, K. D.

Finest stock obtainable. Guaranteed all
clear heart. Size 20x15x3 ins. inside measure.
\$38.00 per 100.

1x1-in. Cypress stakes, pointed.
50 pcs. to bundle, 4 ft., \$3.50 per bd.
50 pcs. to bundle, 5 ft., \$4.50 per bd.
80 pcs. to bundle, 6 ft., \$5.50 per bd.
Ship same day. Cash with order, please.
YOH & HOOKER, Youngstown 2, O.

Surplus Stock

can be easily and quickly turned into
Cash

by listing it in the
American Nurseryman Classified Ads

For \$4.00

you can offer that surplus in a
classified ad of 10 lines on these
pages—quickly and easily turning
stock into cash.

At 40c PER LINE

you can keep a list of specialty
items before trade buyers through
the selling season at small cost.

Send your copy (count 6 aver-
age words to line) for the Feb-
ruary 1 issue to reach us by Janu-
ary 11.

Form for February 15 issue
will close Friday, January 25.

AMERICAN NURSERYMAN

343 S. Dearborn St.

CHICAGO 4, ILL.

LABELS

DAHIA OR TREE LABELS

	Price per 1000
3 1/2 x 5/8 ins., notched (not wired).....	\$2.50
3 1/2 x 5/8 ins., wired (copper).....	3.30

	Price per 1000
4x5 ins. (cartons 1000 each).....	3.30
5x5 ins. (cartons 1000 each).....	3.60
6x5 ins. (cartons 1000 each).....	3.90
8x5 ins. (cartons 500 each).....	6.00
10x5 ins. (cartons 500 each).....	7.00

GARDEN STAKES

	Price per carton
8x 3/4 ins. (cartons 250 each).....	2.50
10x 3/4 ins. (cartons 250 each).....	2.75
12x1 1/2 ins. (cartons 100 each).....	1.75

EVERMARK PENCILS
The original label marker. 1 doz. 7-in.
pencils per box, \$1.25.

Our labels are perfectly white and smooth
on both sides and are pronounced by growers
the best and most economical.

"We ship the same day."

YOH & HOOKER

Youngstown 2, O.

WOOD LABELS

Finest quality, northern White Pine,
Smooth, soft grain.

POT LABELS

	Per 1000
4x5 ins. (1000 per carton).....	\$3.00
5x5 ins. (1000 per carton).....	3.20
6x5 ins. (1000 per carton).....	3.50
8x5 ins. (500 per carton).....	5.15
10x5 ins. (500 per carton).....	6.15
12x5 ins. (500 per carton).....	7.15

GARDEN LABELS

	Per 1000
8x 3/4 ins. (250 per carton).....	7.50
10x 3/4 ins. (250 per carton).....	8.50
12x1 1/2 ins. (100 per carton).....	14.50

TREE LABELS

	Per 1000
3 1/2 x 5/8 ins., copper-wired.....	3.55

GEO. J. BALL, INC.

Phone 299 West Chicago, Ill.

Sell Stock Quickly and Easily with

American Nurseryman Classified Ads.

NURSERY SUPPLIES

NURSERY NAILS

2-in., 15-gauge needle-point pinning nails
with the largest head made for this type
nail. Clean, slick and easiest nail to use.
\$17.50 per 100 lbs.

\$16.50 per 100 lbs., 10 kegs or more per order.

VERHAEGEN NURSERY CO.

12144 Harry Hines, Dallas

or Scottsville, Tex.

ORCHID SUPPLIES

OSMUNDA, mixed. Bu. \$2.00. Prof. bag,
\$1.00. Standard bale, F.O.B. Houston, \$11.00;
2 for \$21.00. Standard bale, F.O.B. Florida,
\$8.00; 2 for \$15.00.

DETEX, a safe DDT spray. Qt., \$3.50;
gal., \$11.00.

WALL TYPE POT HANGERS, hold up to
4-in. pots. Rust-resistant. Space savers.
Each, 25¢; doz., \$2.75; 50, \$10.00; 100,
\$18.50.

BACTO ORCHID AGAR (Difco). 1/4 lb.,
\$3.85; 1 lb., \$14.00.

SHREDDED WAX PAPER, protect your
blooms and plants when packing and ship-
ping. 1 lb., 65¢; 10 lbs., \$5.50.

PRICED F.O.B. Subject to change with-
out notice.

WRIGHTWOOD FLORAL CO., INC.
2407 N. Main St. Houston 9, Tex.

PEAT MOSS

HOLLAND PEAT MOSS

"BRODLEAF" quality. Just arrived.
Standard burlapped balea,
\$3.65 each; 10, \$34.25.

Priced F.O.B. Houston.

WRIGHTWOOD FLORAL CO., INC.
2407 N. Main St. Houston 9, Tex.

PLANT TIES

THE NEW FADE-PROOF

QWIK-TIES

Now made of colorfast plastic for the
florist trade.

Semi-invisible, economical, easy to use.
Packed in carton of 10,000 Per carton

4-in.	18.00
8-in.	18.00
12-in.	27.00

Postage paid when cash with order.

Carton lots only!

McHUTCHISON & CO., Ridgefield, N. J.
695 Grand Ave. Phone Whitney 3-2230

PLASTIC FILM

POLYETHYLENE FILM

2 mil. in 200 ft. rolls, 36 ins. wide, \$6.18;
54 ins. wide, \$9.25; 108 ins. wide, \$18.45;
4 mil. in 100 ft. rolls, 36 ins. wide, \$6.57;
54 ins. wide, \$9.51; 126 ins. wide, \$21.37.
Information on Polyflex 250 available.

F.O.B. Cincinnati, O.

ROUGH BROS., Cincinnati 23, O.
4227 Spring Grove Ave.

POSTS

CEDAR POSTS

North Jersey Cedar posts, 7 to 20-ft. lengths. Send us your requirements now. Specify size.

BROOKFIELD GARDENS, Delaware, N. J.

SPHAGNUM MOSS

1956 CROP NO. 1 SPHAGNUM MOSS

Large burlap bales, long fibered, clean, firmly packed; bale, \$1.30.

JOSEPH JAMROS, CITY POINT, WIS.

Fresh, clean sphagnum moss, write for our low prices, in truckloads or carlots.

Pure Sphagnum Moss Co., City Point, Wis.

Long-fibered sphagnum moss, also ground moss. Price us on truckloads delivered.

Warrens Moss Co., Warrens, Wis.

STAKES

BAMBOO STAKES, DOMESTIC

DIRECT FROM THE PRODUCER

PENCIL THICKNESS

Per 1000

1 1/2 ft., green	.....	2.85	\$ 5.70
2 ft., green	.....	3.80	7.60
3 ft., green	.....	4.75	9.50
4 ft., green or natural	.....	5.70	11.40
5 ft., green or natural	.....	6.65	13.30
6 ft., green or natural	.....	7.60	15.20
7 ft., green or natural	.....	8.55	17.10
8 ft., green or natural	.....	9.50	19.00
9 ft., green or natural	.....	10.45	20.90
10 ft., green or natural	.....	11.40	22.80
11 ft., green or natural	.....	12.35	24.70
12 ft., green or natural	.....	13.30	26.60

HEAVY

Per 100

4 ft., green or natural	.....	\$2.88	\$3.44	%-1
5 ft., green or natural	.....	3.60	4.30	5.30
6 ft., green or natural	.....	4.32	5.16	6.36
7 ft., green or natural	.....	5.04	6.02	7.42
8 ft., green or natural	.....	5.76	6.88	8.48
9 ft., green or natural	.....	6.48	7.74	9.54
10 ft., green or natural	.....	7.20	8.60	10.60
11 ft., green or natural	.....	7.92	9.46	11.72
12 ft., green or natural	.....	8.64	10.32	12.84

Approx. average thickness at bottom end.

A. C. PATTERSON, CENTERTOWN, KY.

CYPRESS PLANT STAKES

50 pieces to bundle.

1x1-in.-3 ft., pointed	.....	\$3.00	per bundle
1x1-in.-4 ft., pointed	.....	3.50	per bundle
1x1-in.-5 ft., pointed	.....	4.00	per bundle
1x1-in.-6 ft., pointed	.....	4.50	per bundle
1x1-in.-7 ft., pointed	.....	5.00	per bundle
1x1-in.-8 ft., pointed	.....	5.50	per bundle
1x1-in.-9 ft., pointed	.....	6.00	per bundle
1x1-in.-10 ft., pointed	.....	6.50	per bundle
1x1-in.-11 ft., pointed	.....	7.00	per bundle
1x1-in.-12 ft., pointed	.....	7.50	per bundle

These stakes are made of cypress and redwood; are good, strong stakes and will give long service. "A little better than seems necessary."

WE SHIP SAME DAY!

YOHO & HOOKER

Youngstown, O.

BAMBOO CANE STAKES

For greenhouse and nursery purposes.

All types and sizes.

Write for prices and quantity discounts.

ALEC HENDERSON, INC.

1305 W. Randolph St. Chicago 7, Ill.

STAKES, GALVANIZED HARD STEEL

GALVANIZED tree guying WIRE.

HOSE for guy wire PADDING.

Prices and samples sent on request.

SCHUFF SUPPLY CO., WILMETTE, ILL.

WOOD PRESERVATIVES

FREE WOOD PRESERVING GUIDE

What and where to use, for stakes, beds, frames, etc.

ROT STOPPERS

972 Ellicott Buffalo 9, N. Y.

TRADE BOOKS

TRADE BOOKS.

Suggestions for nurserymen and their employees:

NEW DESIGNS FOR SMALL

PROPERTIES,

by M. E. Bottomley, \$4.00.

MANUAL OF CULTIVATED TREES AND

SHRUBS,

by Alfred Rehder, \$12.50.

THE FRIENDLY EVERGREENS,

by L. L. Kumlien, \$10.00.

GREENHOUSE HEATING AND

CONSTRUCTION,

by H. E. Gray, \$11.50.

SOILS AND FERTILIZERS FOR

GREENHOUSE AND GARDEN,

by Alex Laurie and D. C. Kiplinger, \$2.50.

HANDBOOK OF FERTILIZERS,

by A. F. Gustafson, \$2.50.

IMPROVED PRACTICE IN

PROPAGATION BY SEED,

by L. C. Chadwick, 25c.

AMERICAN NURSERYMAN

343 South Dearborn Chicago 4, Ill.

NEW YORK PANELS

[Concluded from page 55]

square yard. In any case, the grass grew and an amazing job was ingeniously accomplished.

Raymond Schenk tackled a job of grading a fall of one inch in 640 feet for tennis courts already constructed twice. The top foot of soil was removed and replaced by new prepared topsoil. Drainage was installed, using Orangeburg tile, and the soil surface was leveled by men using 30-inch aluminum rakes, which proved especially suitable for the critical leveling required in the operation.

In the session on maintenance practices, Harry Hyson discussed chemicals for control of turf disease which Mr. Doggett and Mr. Pfeil are finding useful in their on-the-job testing of modern products prior to marketing.

Prof. John Cornman noted recent reports from California about a new crab grass control material, PAX, based on lead arsenate and other arsenical compounds at present not known. The tests at the University of California at Los Angeles indicate almost perfect control under conditions in which crab grass is a particularly bad weed.

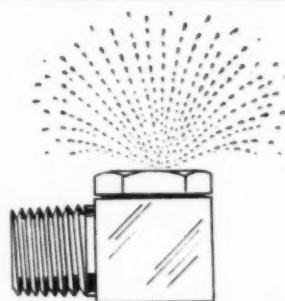
George Swanson, director of the Cornell plantations, spoke of the problems of lawn and landscape maintenance faced by managers who have to operate on a budget and where landscaping comes last in the construction budget.

The problem of leaf removal has received attention, as it takes much hand labor, and no machines are satisfactory in picking up wet foliage. Current tests and plans are to use air blasts to winnow the leaves into rows so that they can be picked up mechanically.

The final morning session was devoted to questions. Many problems raised by nurserymen were answered in audience participation by exhibits of test-yourself type for identification of insect pests, diseases, plant materials and weeds.

Plant specimens brought in by the nurserymen were examined by Dr. Donald Welch and Dr. J. George Matthysse. Their on-the-spot questioning of the nurserymen for detailed information used in interpreting their diagnosis was a surprise to the nurserymen. Next year this project is likely to be expanded.

NILES NURSERY, 7800 Milwaukee avenue, Chicago, Ill., discontinued business December 16, 1956.



DID YOU KNOW?

You can have a complete propagation system for sixteen cents per square foot.

Mist-O-Gation, Inc., after six years' practical experience in the use of fog, now offers a complete misting system, designed to cover 1764 sq. ft. (nozzle spacing 5 ft. 3 ins. square), at a cost of only

\$275.00

Parts of this set may also be obtained as detailed below:

A-420 lineal ft. of 1/2-in. galvanized pipe, cut and threaded in 6-ft. 3-in. lengths \$100.00

B-All galvanized pipe fittings necessary, including tees, drain cocks, valves, couplings and nipples 70.00

C-81 Monarch fig. 629 nozzles (3 gallon) 60.75

D-Automatic electrical timing equipment, including 1/2-in. 110v solenoid, cycling clock (adjustable in one-minute intervals) and 24-hour on/off clock 55.00

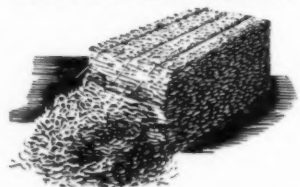
All prices less wiring, F.O.B. Middletown, Del.

Complete list of materials and layout sketch on request. All inquiries invited.

Mist-O-Gation, Inc.

R. D. 2. MIDDLETOWN, DEL.

Wood Feathers

SCREENED
BALED RED CEDAR SHAVINGS

The Perfect Nursery Packing

Manufactured by

MONARCH SHINGLE CO.

P. O. BOX 93

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LOW DELIVERED PRICES—We Solicit Your Inquiries

For Bark Wounds—

NU BARK

Activated sulphur in a very water-proof base. Write for a sample.

NU BARK

20 W. Johnson St.
CHARLESTON, ILL.

Research with Granulars

By A. M. S. Pridham

Of considerable interest at the short course for New York nurserymen at Cornell University, Ithaca, N. Y., December 3 to 5, was a report on the research being conducted with granular herbicides and insecticides. A summary of the data presented to the nurserymen follows, supplementing the New York short course report published in the previous issue and the other research and panel discussion reports in this issue.

Granulars is the term used to cover those formulations of insecticides and weed killers that are used in dry form as a coarse grained dust made up of uniform-size particles of about 30-mesh size of attapulgite, bentonite, vermiculite, perlite or other carriers. The proportion of small air-borne dustlike particles should be as low as possible and would, under ideal conditions, be zero. The weed killer is distributed uniformly over the surface of the particles during the process of formulation. When solvents or diluents are used during the process of formulation, they should be chosen on the basis of their nontoxic nature as well as their physical-chemical properties associated with the problem of formulation.

For weed-control purposes, the granular formulations are important, because under ideal conditions of dry weather the granules carrying the weed killer bounce or shake off the plant, thus reducing contact between the weed killer and the crop to a minimum. Conversely, the contact between the weed killer and the germinating or shallow-rooted weed seedling is at a maximum. For maximum effectiveness, applications of granulars should be made on dry days and the plant shaken or jarred to free it from contact. Under conditions of field practice, damage to crops is in fact nonexistent on dry foliage freed of lodged particles. Damage has been noted on perennials of rosette type, broad, hairy or tomentose foliage on which particles of granular and particularly the minute particles are likely to remain. Iberis, phlox, myosotis, primula, echinops and the like have shown injury varying from localized discoloration to lethal effect.

In field tests at Ithaca with garden roses, chrysanthemums and other



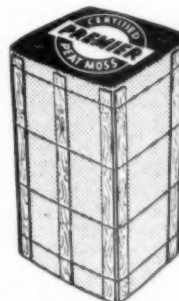
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Use and Sell PREMIER PEAT MOSS the best soil conditioner in the best packages

Premier is the biggest selling brand to nurseries and home gardeners because it's the No. 1 material for soil improvement . . . mulching . . . transplanting . . . lining out . . . seedbeds . . . many other uses.



Veneer or Burlap

Sell SOIL X-PEDITER—the ready-to-use, free-flowing sphagnum peat in bags—2½ to 100 lbs.—plastic protected.

Any combination can be shipped in one car

Various size bales for nursery and customer use
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Send now for prices and details

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Produced from Soft Hardwoods—**NO OAK**
Compact bales of approximately 80 lbs.
\$17.50 per ton in carlots of 450 bales.

F.O.B. Mill

References: Commercial Nursery Co. H. G. Hastings Co.
Decherd, Tenn. Atlanta, Ga.

Sample mailed on request.

DAYTON VENEER & LUMBER MILLS
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Help and Situation Wanted and For Sale Advertisements.

Display: \$1.50 per inch, each insertion.

Lines: 40¢ line; minimum order \$1.00.

SITUATION WANTED

Expert nurseryman, 46 years old, desires permanent position, preferably in east or midwest, as manager of garden center or large nursery specializing in outside growing stock. Thorough knowledge of production and salesyard operation, with experience in merchandising, buying and display of plants. Available February, 1957. Address replies to Box 343, care American Nurseryman.

HELP WANTED

Propagator to take charge of growing landscape stock including shade, deciduous shrubs and coniferous evergreens. Approximately 30 acres now in production. Give full details including age, health, training, experience and family status. Permanent position with good future. Living quarters available. Replies confidential.

COLUMBIA & OKANOGAN
NURSERY CO.
2nd and Mission Sts., Wenatchee, Wash.

HELP WANTED WHOLESALE SALESMAN

Young man to represent large mid-western nursery carrying complete line of nursery stock, excellent territory. Must be ambitious and anxious to get ahead. This job carries with it the chance to advance to a top level management position for the one who can prove himself. Expenses, drawing account and liberal commission. All replies will be kept confidential. Write Box 345, care of American Nurseryman.

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Young man, age 25 to 35, experienced in typing, office machines, routine procedures relative to a landscape business with one of the largest in upstate New York for permanent work; tremendous opportunities for advancement. Business is expanding into nursery and garden store fields. New building will be erected in 1 to 2 years. Write stating age, marital status, experience, background, etc.

MONROE
LANDSCAPE SERVICE, INC.
Rochester, N. Y.

HELP WANTED

We need a man qualified to design, draw plans and call on our customers. Salary good for suitable man. Located in Virginia. We have a good sales area, excellent stock and a garden center. If interested write giving training, experience and reference of former employer. Address replies to Box 319, care of American Nurseryman.

HELP WANTED—Experienced man to help in operation of small nursery and landscape business. This is a steady position with good salary for qualified person. Write giving full details. BLODGETT NURSERIES, R. D. 3, Perkaskie, Pa.

HELP WANTED

LANDSCAPE DESIGNER-SALESMAN

Full-time, permanent position for a willing, aggressive and cooperative man with a knowledge of landscape design.

We have over 200 acres of nursery stock and are one of the oldest landscaping firms in the Cincinnati area.

CASSINELLI'S GLENDALE
NURSERIES INC.
Box 415 Glendale, O.

HELP WANTED

SALESMAN

Expanding wholesale nursery needs aggressive representative. Write giving age, experience and all pertinent information in first letter. All replies will be kept strictly confidential. Write Box 348, care of American Nurseryman.

HELP WANTED

An experienced landscape foreman and a yard salesman for a retail garden center and nursery. Write stating age, experience, background, etc.

HAROLD'S GARDEN CENTER &
NURSERY
183rd and Halsted Sts., Homewood, Ill.

HELP WANTED

LANDSCAPE SALESMEN

Excellent opening for two experienced landscape salesmen capable of making contacts, drawing plans and preparing estimates. Excellent opportunity and top salary for the right men. Write for appointment.

Mr. Don Schultz
SECOR LANDSCAPE CO.
3340 Secor Rd. Toledo, O.

HELP WANTED

Man to manage our established retail garden center in Buffalo, N. Y. Prefer experience. Attractive salary.

MALONEY BROS. NURSERY CO., INC.
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FOR SALE

Used complete greenhouses. Used greenhouse materials, glass, pipe, valves, etc. Greenhouses bought for wrecking.

SEABOARD GENERAL SUPPLY CO.
1050 Magnolia Ave. Elizabeth, N. J.

FOR SALE

Nursery and landscape business. 15 acres, greenhouse, residence, stock and equipment and other buildings. Located near Pittsburgh, Pa. Price upon request. Address replies to Box 347, care of American Nurseryman.

WANTED TO BUY

Wholesale or retail nursery in the midwest or southeastern part of the United States. Address all replies to Box 349, care of American Nurseryman.

FOR SALE—Used 30-lb. tins, \$50.00 per 1000 in carload lots. F.O.B. Frankfort, Mich. Car average 6000-tin capacity. Cans cleaned before loading. For freight rates see your local agent. Lids available at \$15.00 per 1000. Samples on request. PET-RTZ FOODS DIVISION, PET MILK CO., Frankfort, Mich.

FOR SALE

Large, old, well-established wholesale mail-order forest tree nursery with excellent reputation, doing nationwide business in Christmas tree planting stock and ornamental lining-out material. Two modern homes and one small one, office, a number of necessary buildings, including modern cold storage, best new construction. Abundance of pure water. Irrigation, equipment, shading material. Inventory of 7 to 8 million seedlings and transplants. Annual sales over \$100,000 can increase to \$200,000. Beautiful location near churches, schools, college town in western Pennsylvania. Exceptional investment opportunity for one or two younger men. Reason for selling, poor health. Only financially responsible persons considered. Send replies to owners at Box 339, care of American Nurseryman.

FOR SALE

Landscape and cash-and-carry nursery established since 1929. 17 miles northwest of Chicago. 15½ acres with 1,000-ft. frontage. Stock includes 20,000 perennials, 10,000 assorted evergreens, plus assorted trees and shrubs. 7-room house with barn connected; cold-storage room, 12x18 ft.; office building; tool shed, and storage shed. One greenhouse, 13x80 ft.; another greenhouse, 17½x80 ft. New home development of over 6,000 homes one-half mile away. Good spot for garden shop.

Address replies to Box 350, care of American Nurseryman.

FOR SALE NURSERY

Owner wishes to retire after operating successfully for more than a quarter of a century. Well stocked with salable plants and with younger ones for future sales. Plants now growing will more than pay for the entire business. Ideal for two active nurserymen, one to look after wholesale, other for retail end. Fine stock of plant material, good land, ample equipment and plenty of established business. \$25,000 cash required, balance on terms. Located in southern midwest. Purchaser would find business profitable from the first month. Write Box 346, care American Nurseryman.

FOR SALE

Garden center with excellent potential and low overhead. Ideally located in central Pennsylvania. Well accepted by growing community of 100,000 population. Will sell outright or accept qualified active partner. Present owner willing to continue financially if necessary. Minimum capital required \$7,000. Write Box 351, care of American Nurseryman.

FOR SALE

Small nursery and landscape business. Good growth possibilities. Six-room house with improvements, barn, outbuildings, approximately 20 acres.

McNICOL ESTATE
Lewes, Del.

plants, granular formulations have given at least as effective weed control as spray formulations when equivalent poundage of active ingredients has been used per acre or unit area. Fall treatment has lasted over into the spring season, and granulars can be used on shallow snow among dormant woody plants, but not among leafy perennials where snow as it melts would increase contact between the weed killer and the plant tissue.

Formulae

Weed killers so far tested in granular form include Isopropyl-n-(3-chloro-phenyl) carbamate (CIPC) upon which most of present experience is based. Endothal and the strawberry mix of (Crag-1 and CIPC) also Alanap-3 have also shown effectiveness. James Shearer, of the Jackson & Perkins Co., Newark, N. Y., also reports good results from the use of dinitros in granular form.* A number of other weed killers in granular form are now under test, particularly to determine the effect of spacing the individual particles at specific distances. Such information is helpful in determining both the necessary and useful bulk of granular needed per acre or unit, as well as the amount of weed killer used in the formulation. Present indications with CIPC formulated by Niagara Chemical Division of the Food Machinery & Chemical Corp., on 30 to 60-mesh attapulgite in quantities of 2 to 10 per cent are to the effect that the 10 per cent composition can be used with no crop injury but good weed control. Four per cent material used at the rate of 12 pounds of active ingredient per acre requires approximately 300 pounds of granular formulation per acre. This volume is adequate for use in most fertilizer or dusting equipment and for amateur use. Lower quantities of granular per acre would be desirable for large operations where the number of bags to be handled, used, stored and transported could be reduced to a practical minimum yet to be determined, but likely 100 pounds or less.

Granular herbicides, particularly CIPC, used on dry foliage of woody nursery stock, preferably on seedling weeds, has performed well without

*Mr. Shearer also reported successful application of granular 10 per cent dieldrin, 30 pounds per acre for cutworm control and granular Nemagon 250 pounds per acre by spreader for chafer control. Bordens urea formaldehyde, 200 to 400 pounds per acre, for long-period effectiveness as a nitrogeous fertilizer, was also used.

WANTED



Patented Des. 167009

HAVE YOU SEEN AND USED THIS CONTAINER?

Name: **PLANTAINER**

Description: Height, $6\frac{7}{8}$ ins.; weight, 10 ozs.; top diameter, 6 ins.; bottom diameter, $5\frac{1}{8}$ ins. Finished with baked enamel paint. (trade designated as one gallon)

The PLANTAINER is wanted for:

- Killing the outmoded methods of growing nursery stock.
- Increasing the profits of nurserymen.
- Outlasting all other containers.
- Cutting operation costs.
- Improving the appearance and quality of plants.

Anyone knowing the whereabouts of the PLANTAINER will capture the finest in modern merchandising.

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CRAB APPLES FOR AMERICA, by Donald Wyman.
\$2.00, postpaid.

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NO MATTER WHAT YOU GROW...
THERE'S A UNION POT TO FIT IT!



More than 20 sizes to choose from!

Write for Price List
UNION PRODUCTS, INC.
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NOW IS THE TIME TO ORDER

ASBESTOS BENCHES

*Rough Brothers is
your guarantee of
quality benches!*

DURABLE — LONG LIFE — ELIMINATES FUNGUS GROWTH — WILL NOT CRACK WHEN STERILIZING.

ROUGH BROTHERS GREENHOUSES BUILT to fit your NEEDS ALUMINUM or WOOD



Rough Brothers greenhouses are available in a wide choice of types, sizes, lengths and styles.

Let Rough Brothers design and build the house best suited for your particular growing needs.

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is equipped to furnish and install the proper cooling equipment for your greenhouses

FLORAL BREEZE Cooling System



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damage to woody plants and without damage to gladiolus and many herbaceous types under summer conditions. In addition to having safety features, granulars eliminate the need of hauling clean water to the site of a spray operation. Dusting equipment requires care and cleaning, but where granulars are kept dry till used, they do not present the complications of measuring out exact quantities of material, use of wetting agents and other critical procedures for satisfactory spray operation.

Equipment was demonstrated for applying granular herbicides for test and research plots and for amateurs' gardens. The Jackson & Perkins Midget duster represents a small rotary duster. Other dusters could be used, as well as fertilizer spreaders, if set correctly and used at planting time on gladioli or a similar crop, such as hardwood cuttings.

Hudson crank duster was also demonstrated as larger hand equipment. A wheelbarrow gas engine model is in preparation. Gandy and other fertilizer spreaders with a spatter board are suitable for plant bed or liner areas where tractor-mounted equipment is not practical. Photographs supplied by the Ganrud Co. showed the versatility of Gandy equipment in a combination unit for low or high-clearance equipment and for direct placement of granulars at the soil level. This equipment and that of other companies is in present use for the application of insecticides and nematocides.

James Shearer showed pictures of modified seed-spreader equipment used for granulars. This tractor-drawn unit had the spatter plates mounted close to the ground, between the stock rows. An adjustable arm carrying a light rubber mat made from an old inner tube brushed over the rows of nursery stock, shaking off any particles of granulars that remained on the plant foliage.

The nurserymen saw samples of granular herbicides and the effectiveness of CIPC at rates of two to 16 pounds per acre in control of crabgrass, foxtail and barnyard grass as weeds sown in steam sterilized soil among chrysanthemum, boxwood, forsythia and Rosa multiflora as representative nursery crops.

ROSE HILL NURSERY, INC., has been formed in St. Francis, a suburb of Milwaukee, Wis., to operate a nursery and landscaping business. The incorporation papers were signed by Joseph S. Welcher, St. Francis, Wis.



FOG-MIST NOZZLE

for Propagation and Humidity Control
**LONGER LIFE
PRECISE PERFORMANCE
BEST NOZZLE ANYWHERE**

Stainless Steel Orifice Insert
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Monel Metal Cylindrical Screen
Phosphor Bronze Alignment Brackets

Nozzle No.	Orifice Size	At 20-pound Pressure Diameter G.P.M.
550-A	0.28 in.	7 ft. .1
550-B	.060 in.	12 ft. .3
550-C	.080 in.	18 ft. .7

Price, \$2.95 each, postpaid. One dozen, \$2.36 each, postpaid with check or money order. Guaranteed. 3% tax in Florida.

SPRAYERS AND NOZZLES SALES
2575 28th Ave., No.
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PEONY SUPPORTS



Model
533E
33" High
2 Loops



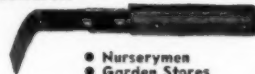
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HANDY PEONY SUPPORT is a must wherever peonies are grown... They should be shown early as they not only protect the stems of the flowers in bloom but also keep off the stray feet of the youngsters and pets and protect the early shoots. May be used later in season for clumps of phlox or 'Mums', etc.

This is an Ideal Garden Gadget.
Send for folder today.

LANSING SPECIALTIES MFG. CO.
Dept. AN 57, 918 Clark Rd. LANSING 17, MICH.

JOHNSON WEEDER Attention—



- Nurserymen
- Garden Stores
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Here is the ideal hand weeder—sturdy, high-quality steel blade for cutting weeds; easy-grip, hardwood handle. Designed and used by a grower, 50¢ each per dozen, postpaid; 40¢ each per gross, F.O.B. Ironwood.

JOHNSON WEEDER
322 Douglas Blvd. IRONWOOD, MICH.

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METROMATIC

**The Automatic Greenhouse Ventilator
DOES Something about the Weather**

lowest-priced automatic roof ventilating unit on the market

Whether you're at home or away for the day . . . METROMATIC is always on the alert to changing weather conditions. This thermostatically controlled roof ventilating unit reacts to rises and falls in atmospheric temperature and accordingly regulates ventilation in your greenhouse. Adaptable to any new or existing handwheel, METROMATIC is amply powered and durably constructed to provide you with low cost, trouble-free service. Nothing is more dependable . . . nothing is more essential for your greenhouses. This winter . . . and subsequent winters . . . do something about the weather with METROMATIC. Get the complete facts today.

METROMATIC HIGHLIGHTS . . .

1. Designed by greenhouse engineers for greenhouse people.
2. Standard electrical components . . . always available.
3. Motor overload protection.
4. No strain on vent apparatus used to stop the METROMATIC.
5. Complete modulating action.
6. Unit functions on $\frac{1}{4}$ -degree temperature change.

7. Operates on true temperature change.
8. May be set for any degree of opening or closing.
9. May be manually controlled—for fumigation, etc.
10. Remote control unit—available at slight additional cost.

\$184.54

Less 3%, 10 Days

11. Added Feature—for very little more.

METRO RAIN CONTROL

Designed for Metromatic. First drop of rain closes vent quickly. When rain stops, Metromatic thermostat controls take over.

Very simple to install, the METROMATIC is truly a greenhouse must you can easily afford . . . Get the amazing facts today . . . Write for free information today . . . or better yet send in your order.

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Greenhouse Builders — Heating Engineers

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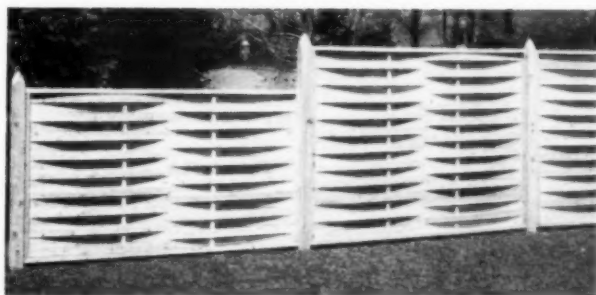
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than any other single factor, directed serious consideration to more practical, less expensively maintained street trees. Confronted with the need of costly spray schedules and the sanitary measures necessary to give all possible protection to non-infected elms, along with the expense of removing thousands of dead and dying trees, forestry department officials in many communities had good reason to regret the presence of towering elms on congested city streets. Smaller species would not only have served as well, but, when doomed by a fatal blight stubbornly resistant to positive control measures, would have presented a far less difficult situation.

Shortsighted Policies

Some persons who noted the efforts to arouse interest in more thoughtfully formulated programs for city street embellishment, but who were so far spared the problems posed by serious incidence of Dutch elm disease, were inclined to let the other fellow worry about future problems and optimistically continued planting American elms, often spaced only 25 to 30 feet, on 3-foot tree-utility belts bordering streets

To beautify and enhance house and landscaping . . .



FARLEY WHITE CEDAR FENCE



FARLEY BASKETWEAVE FENCING — a decorative friendly fence. Horizontal members are locked in place to prevent splitting or pulling out.

FARLEY PROTECTIVE STOCKADE — America's favorite for landscaping backgrounds and maximum privacy. Tightly assembled of cedar saplings, carefully chosen for uniform appearance.

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Write for literature describing the many fence styles available together with Farley Fence prices and details concerning dealership in your area.

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NURSERYMEN OF DISTINCTION KNOW . . .

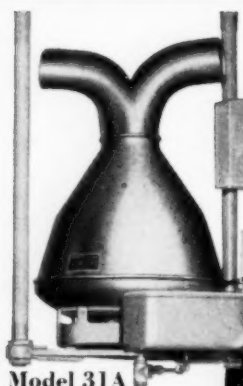
A timely suggestion when they need one. That's why more and more nurseries are buying . . . using . . . and selling high-quality **REX PEAT MOSS**. Easy to use, easy to sell, REX is sized for your every need.

WRITE TODAY FOR PRICES



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P.O. BOX 1564 MOBILE, ALABAMA



Model 31A
Ideal for long,
narrow greenhouse.

For The RIGHT HUMIDITY
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Grows Better Plants
Faster
Automatic Operation
Easy to Install
Used by Hundreds of
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Write for prices and data sheets.
Please give size of your greenhouse.

Use
STANDARD
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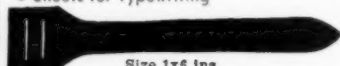
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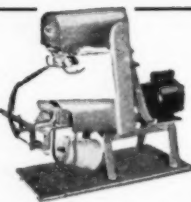
NURSERY TAGS "Weather Resistant"

- Made of Water-resistant Tough Tag Board
- All White, Easily Marked
- 8 Colors
- 9 Sizes and Styles
- Sheets for Typewriting



Size 1x6 Ina.
Prices per 1000—White Tag Stock
1000 to 4000 . . . \$1.50 20,000 . . . \$1.05
5000 to 9000 . . . 1.30 50,00085
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Write Today for Prices and Samples
PREMIER SOUTHERN TICKET CO., INC.
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FELINS BUNCH TYER

Automatically adjusts itself and ties any size bunch up to 19 ins. in circumference. Ties roses, glads, seedlings,

as well as any other type nursery stock and cut flowers. Fast and efficient. Tying mechanism inverted so that dirt will not get into it, contributing to longer life.

FELINS TYING MACHINE CO.
3351 N. 35th St.
Milwaukee 16, Wis.

much too narrow properly to accommodate such large-maturing species. These planters should scan the cost sheets, compiled by some cities, recording the expense incurred in repairing curbing and broken pavements and meeting cost of trimming, storm damage, spraying and lawnsuits.

Others, who appreciated the shade only large, wide-spreading trees can give, were appalled by distressing visions of city streets spouting grotesque, dwarf forms and rows of undersize trees resembling lollipops and shaving brushes. Their apprehension was baseless. Of all the many new species and clones selected and recommended, after careful evaluation and extensive research, none are dwarf and less than 10 per cent are forms of formal growth-habit, such as globe, columnar and fastigate trees. There is a definite need for these as functional types in various phases of landscape work.

Back in 1941, some arborists were quickly interested in promoting the use of better trees and making them available for general use, and it is the earnest efforts of these practical-minded, forward-looking men which are responsible for the accelerated progress now noted. They have, by persistent efforts, succeeded in bringing valuable information to all users of trees. Progressive nurserymen are listing more species and forms than ever before.

Pioneer Efforts

While present-day progress results from the combined efforts of many able arborists and interested men in other fields, it is proper that commendation be accorded those whose untiring work has been especially productive. Edward H. Scanlon, consulting arborist with the Cleveland Electric Illuminating Co., was one of the first to go all-out in the crusade for better-adapted trees. His confidence in the eventual success of the movement was so great that he immediately planned formation of a nursery company with the express purpose of handling only trees of proved worth, regardless of their obscurity. It is pleasing to learn that the sales of Scanlon's Tailored Tree Nursery are limited only by its ability to produce enough stock to meet ever-increasing demands.

Fred R. Kilner, editor and publisher of the *American Nurseryman*, a far-reaching and influential publication in the trade, has been most cooperative in devoting space to articles on practical tree selection and use; to Mr. Kilner goes much credit for the fact that many nurs-

AQUA-GRO[®] REPORT

(NO. 1 OF A SERIES)

NON-IONIC ORGANIC WETTING AGENT

AQUA-GRO is an entirely NEW product. It acts to improve the efficiency of water. AQUA-GRO is not a fertilizer or soil conditioner. It is a wetting agent which actually changes the physical properties of water, making "water wetter." Wetter water penetrates deeply and uniformly in soils and around plants—reducing the frequency of watering.

EXPLANATION

BALLED AND BURLAPPED STOCK

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erymen now list a more complete offering of desirable but previously little-known species and forms.

In March, 1955, at Cleveland, O., the first street tree and utility conference was held. This meeting was brought about by the efforts of Mr. Scanlon, who realized the need for better relations between city street departments and utility companies. Sponsored by the Edison electric institute, Illuminating Engineering Society and the National Shade Tree Conference, this meeting afforded an opportunity for city officials and utility representatives to formulate mutually satisfactory plans for the solution of problems arising from conflicting interests. The published proceedings of this meeting contain much useful information and can be obtained by contacting the sponsors.

Useful Publications

An excellent handbook for anyone interested in the proper use of good trees was recently prepared by Herbert J. Cran, Jr., an arborist associated with the Connecticut Light & Power Co., and Harold O. Perkins, associate professor of landscape design, University of Connecticut, and published jointly as a public service by six New England utility companies. These publications serve a

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useful purpose in bringing knowledge to homeowners and are instrumental in creating greater demand for a wider choice of species and forms.

Because greater use of small and medium-size species is advocated, it does not mean that larger-growing trees should never be used. The placing of huge trees where their development will become an expensive nuisance is opposed, but plantings of elms, maples, oaks, planes and simi-

lar trees, where growing conditions make them practical as well as beautiful, should remain a part of every city forester's program. Sturdy trees should continue to provide wind-breaks for homes in the country.

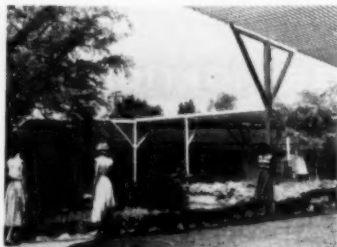
Times change, however, and what was desirable in a past era may prove outmoded today. In former years, canopies of foliage did moderate temperatures in dwellings, and well-shaded streets added greatly to

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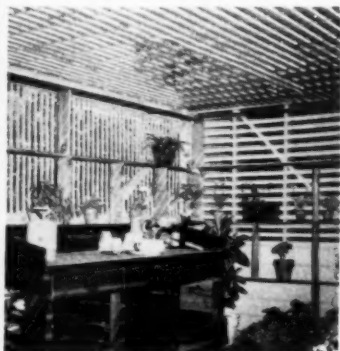


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pedestrians' comfort and enjoyment. But are not these properties of large trees costly luxuries? Might they not be actually superfluous in this modern age? Regarding home temperature control, even in the hottest climates, it is probably a matter of but a few years before air-conditioning units will be standard home equipment. As for strolling, this is not a popular form of recreation in times when people drive air-conditioned cars to the corner store.

Flowering Trees

For some unknown and likely invalid reason, practically all street plantings have been of inconspicuously flowering species; trees noted for beauty of bloom have been neglected in this type of work. There are, and have been for many years, perfectly hardy species of flowering trees suitable for use along city streets. The main drawback is the widespread opinion that such trees are too temperamental and require costly coddling. While this may be true of franklinia, davidia and other prima donnas of the tree world, there are dozens of fine flowering trees that can bring beauty and charm to residential districts. They need not be planted under soot and fume-belching stacks in industrial centers, where gleditsia, platanus or ulmus might be better adapted, but they would prove welcome changes from the usual type of tree. The over-all, lifetime costs required to assure best results from plantings of small and medium-size flowering trees, embracing soil conditioning, pruning, spraying and eventual removal and replacement, is but a fraction of the expense necessary to maintain an equal number of large foliage trees.

There are trees adapted for satisfactory service in almost all situations and under almost all conditions. With a little thoughtful planning and careful selection on the part of planters today, future generations can be spared the costly problems we are now experiencing as the result of some unwise planting practices in the past.

OHIO APPOINTMENT

Dr. Kenneth W. Reisch was recently appointed assistant professor in the department of horticulture and forestry at the Ohio State University and the Ohio agricultural experiment station, Columbus. His teaching duties will consist of courses in woody plant materials and arboriculture and a course dealing with retail florists' business management



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Roots Cuttings—Sets Blossoms

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and flower design technique. In research, he will be associated with Dr. L. C. Chadwick in investigating such projects as nursery soils, plant propagation, shade tree nutrition, container nursery stock, weed control and light effects on plants.

Dr. Reisch received his B.S. degree in landscape design from the University of Connecticut, in 1952. Serving as the Ohio Nurserymen's Association fellow at Ohio State University he conducted research on dwarfing ornamental plants and received his M.S. degree in 1953. Dr. Reisch was appointed instructor in horticulture at Ohio State University in 1953 and after extensive research in the field of light effects on the chrysanthemum, received his Ph.D. degree in 1956.

COURT'S RABBIT RULING

The verdict of a LaGrange, Ky., jury given December 20 acquitted two employees of the Theodore Klein Nurseries, Crestwood, Ky., accused of hunting rabbits at night on nursery property and upheld the nursery's contention that it has a right to defend its crops against the animal pests.

Charges were brought against the men by the county game warden, who maintained they were found December 6 violating a law which forbids rabbit hunting at night with lights. County judge James A. Hall, who presided at the trial, instructed the jury that the men should be acquitted if they were protecting nursery property, even though they violated the game law. He made no mention of the warden's assertion that the nursery should have obtained permission to shoot the animals.

B. H. McINTOSH is growing rock plants and perennials at a nursery being started at 858 East drive, Woodruff place, Indianapolis, Ind. He expects to start selling in the spring.

EVE'S GARDEN is the name announced by Mrs. Eva M. Nelson, Clarion, Ia., for her newly opened nursery, which will specialize in iris, peonies, chrysanthemums and other perennials.

BIRD & SON, INC., East Walpole, Mass., manufacturer of plant containers for the nursery trade, will build a modern 3-story administration building to house 275 office employees and executives. Scheduled for completion in early 1958, construction will commence soon on a 13½-acre site.

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Tree Disease Problems Discussed At Ohio by Plant Pathologists

By Richard Campana

Plant pathologists from all parts of the United States and Canada attended the 48th annual meeting of the American Phytopathological Society at the Netherland-Hilton hotel, Cincinnati, O., December 5 to 8. Most of the program was devoted to 22 formal and technical sessions at which 259 papers on research were presented by participating members.

The following report covers the discussions of diseases or disease problems of special interest to nurserymen, landscape men, foresters and arborists.

Shade Tree Diseases

With Dr. Phil Rusden, of the research laboratories of the F. A. Bartlett Tree Research Co., Osterville, Conn., presiding, the first informal conference on shade tree diseases at an annual phytopathological meeting discussed the possibilities for a scheduled conference of substantial scope in 1957. Because of the greater number of shade tree pathologists in the northeast, it was decided that the New England section meeting of the A. P. S. at Springfield, Mass., would provide the most favorable opportunity for such a conference.

Dr. Francis Holmes, of the shade tree laboratory at the University of Massachusetts, called attention to the serious decline of ash in the northeast and requested information from other regions of the country. Dr. Richard Campana, of the Illinois State Natural History Survey at the University of Illinois, Urbana, cited evidence of general decline and mortality of ash in the midwest and described the symptoms as similar to those resulting from drought and mineral deficiency. It was generally agreed that the condition was not peculiar as a shade tree trouble, but was also present under forest conditions. Further discussion indicated that ash decline is common from New England south to Virginia and west to Missouri and Minnesota, including most intervening states.

Plane Canker Stain

Edgar Rex, of the New Jersey department of agriculture, called for a review of some shade tree disease control recommendations. Using canker stain of London plane as an example, he cited a recent reference to old recommendations for control

considered obsolete in light of recent observations. Mr. Rex pointed out that the period from December 1 to February 15, presumed to be safe from transmission of canker stain occurring through pruning tools, was not safe, but recent literature continued to state that it was. He also called attention to other aspects in the symptom expression of canker stain not previously described and possibly confused recently with other diseases or injury from illuminating gas. Dr. Rex called for further research on this disease and recommended that planting of London planes for street trees be discontinued. In addition he mentioned that sycamore was not affected by canker stain as reported by others.

Dr. Malcom McKenzie, of the shade tree laboratory at the University of Massachusetts, and Dr. Dave Marsden, of Eastern States Cooperative, led a discussion on control of cytospora canker of spruce. Dr. Mc-

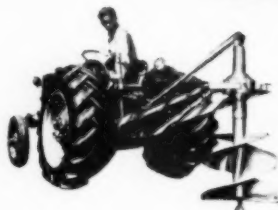
Kenzie recommended pruning of affected branches during dry weather and mulching to reduce thermal fluctuations. He disagreed with those who do not recommend spraying with fungicides to control the disease and acknowledged the conflicting reports on this practice. Dr. Marsden discussed his work on the disease and confirmed Dr. McKenzie's comments. He said that, while the disease appeared to spread from lower branches upward, even upper branches were susceptible to the degree that they could produce cankers and fungus spores. Fungus spores so produced could then be carried downward with dripping of resin, although upper branches so affected were not killed by the fungus but recovered.

New Shade Tree Virus

Dr. Rusden called attention to bleeding canker of maple in New Hampshire, stressing its serious nature and the need for research here. He also mentioned a new disease of Norway maple suspected to be caused by a virus and currently under investigation by Dr. J. S. Boyce, of Yale University, Cambridge, Mass. The disease is known as tatterleaf, because of the ragged holes in leaves similar to those caused

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No. 2 — \$10.80 per 1000

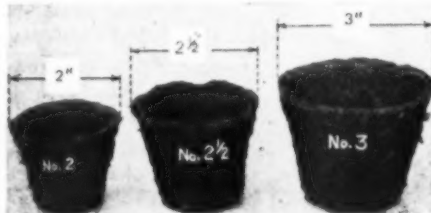
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Unit Prices F.O.B. Pittstown, N. J.

No. 2	100 for	\$2.50	250 for	\$4.50
No. 2½	100 for	2.75	250 for	5.00
No. 3	100 for	3.35	250 for	5.75
DEPT. STORE UNITS 2—No. 3 Pots per unit. Carton of 48—15c Units \$7.20				
Stock No.	Box of	Size No.	Shipping Carton	Shipping Weight
201	1 doz.	2 -in.	25 doz. pots	20 lbs.
251	1 doz.	2½ -in.	25 doz. pots	25 lbs.
301	1 doz.	3 -in.	25 doz. pots	35 lbs.
				List Price
				50c doz.
				60c doz.
				75c doz.

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by severe pelting with hail. Added to elm phloem necrosis and elm mosaic, tatterleaf of maple if confirmed would make the third known virus disease of shade trees on a list which will undoubtedly increase with time.

In a discussion on anthracnose of sycamore, Mr. Rex was unable to note any difference in susceptibility between London plane and sycamore, indicating again that London plane had been oversold on this point.

Good results for control of sycamore anthracnose were reported with various chemicals, applied either as a dormant spray or as a spray applied at the bud break or young leaf stage. Both Puritized Agricultural Spray and Bordeaux were mentioned as effective, but there were conflicting reports from different regions on the effectiveness of Bordeaux. Dr. J. C. Carter, of the Illinois State Natural History Survey, indicated that Bordeaux was ineffective in experiments in Illinois; Dr. McKenzie, of Massachusetts, indicated that results in Massachusetts were inconclusive.

Dr. Swingle, of the United States Department of Agriculture at Columbus, O., reported that about 24 American elms had been found

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\$6.95 and \$8.95*

*All prices delivered in U. S. A.

Write for catalog showing complete line.

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which appeared to be resistant to Dutch elm disease after several years' trial, but cautioned that results here are considered preliminary. Apparently, there are no elms known to be completely immune to the disease. The news of some substantial resistance in the American elm is both encouraging and significant. Up to now the degree of resistance in this elm has been reported to be negligible.

In a discussion stimulated by Dr. Robert Campbell, of the University of Minnesota, St. Paul, Minn., Dr. Holmes described injury to roadside elms and maples from heavy applications of sodium chloride and calcium chloride. Observing a similar condition in Minnesota, Dr. Campbell had noted that leaves were scorched. Dr. Carter indicated that not only could leaves be scorched, but that root injury could occur. The matter of root injury from highway salting will be investigated further by Dr. Holmes. This research was initiated originally by Dr. Marsden in Massachusetts.

Review of Recent Research

Dr. F. W. Holmes reported flowering dogwood, *Cornus florida*, to be susceptible to verticillium wilt. Not only was the susceptibility of dogwood clearly confirmed for the first time, but the susceptibility of both American elm (*U. americana*) and sugar maple (*Acer saccharum*) previously reported was also confirmed. In addition, Dr. Holmes demonstrated that artificial inoculation of tree species for susceptibility to verticillium wilt could be successfully accomplished without difficulty; this had not been done previously. The addition of flowering dogwood to the growing list of known susceptible trees is another ominous reminder that many more host trees for this and other fungi may yet be undetected.

Successful inoculation of slash pine seedlings (*P. elliotti*) with the fusiform rust fungus, *Cronartium fusiforme*, was reported by F. F. Jewell, of the southern forest experiment station. Because rust fungi cannot be cultured artificially, conventional methods for inoculation of susceptible hosts are not effective. Consequently, manipulation of factors favoring natural culture of the fungus for the successful inoculation is essential. That such manipulation can be successful, though difficult, was well illustrated in the test reported. Maintenance of high humidity with an available source of the fungus over seedlings in nursery beds for 72 hours resulted in 60 to 83 per

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cent infection of seedlings. Wrapping potted seedlings in fungus-bearing oak leaves with moist cotton and maintaining high humidity resulted in 70 per cent infection, whereas without the cotton similar treatment resulted in but 50 per cent infection.

Fire Blight Control

The possibility that bacteria harmless to apple trees may be valuable in controlling fire blight was reported by G. J. Farabee, of the California Spray Chemical Corp., Richmond, Calif., and J. L. Lockwood, of Michigan State University, East Lansing, Mich. Certain bacteria associated with the fire blight bacterium, but not able to cause the disease, prevented fire blight from developing when artificially inoculated into Jonathan apple trees at the same time. The possibility of controlling disease with a built-in producer of an antibiotic substance is an exciting prospect. If this same principle could be developed not only to prevent infection as indicated here, but to cure disease after establishment in the host in such a manner, a landmark in plant pathology would be reached.

According to Dr. A. Engelhard, of E. I. du Pont de Nemours & Co., and Dr. W. H. Bragoner, head of the botany department at Iowa State College, typical expression symptoms of early oak wilt are often obscured when infection occurs late in the season. In such cases an atypical expression of symptoms, defined as dwarf-leaf, occurs early in the spring as the first detectable evidence of the disease in trees previously unaffected. Trees so affected became noticeable shortly after breaking of buds of healthy trees. Breaking of buds of affected trees was delayed. Dwarf-leaf symptoms involved pale green to yellow-green foliage, dwarfed leaves more pronounced in the upper crown than in the lower and dwarfed leaves that cupped, curled, yellowed, browned or dried. Sizes of leaves produced varied from little or no development in tops of the crowns to apparently full size on bottom branches.

Symptoms May Misguide

The symptoms described reflect a condition of trees weakened at a previous time and may be considered a reliable guide to the decline of such trees. Not peculiar to oak, such symptoms are indicative of many tree troubles and occur in a wide variety of diseases of various trees. There is value, however, in calling attention to their place in the pattern of symptoms of oak wilt, in

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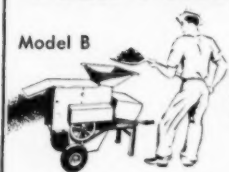
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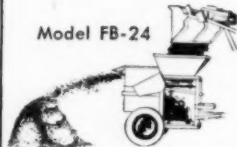
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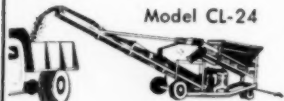
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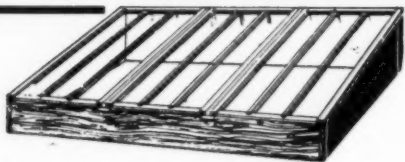
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order that their atypical recurrence may not misguide the layman to an inaccurate diagnosis.

Mats and pads of the oak wilt fungus, a source of spores for spread of the disease overland, develop most favorably between bark and wood of diseased or dead trees at temperatures from 43 to 69 degrees Fahrenheit, according to a report by Dr. Engelhard. Mats failed to develop on some logs stored at 90 degrees F., demonstrating the influence of heat in reducing probability for spread of the disease at long distances.

An apparently new disease of citrus trees in Florida was reported by J. F. L. Childs, of the U. S. D. A. Rootstocks of rough lemon (*Citrus limon*), sweet orange (*C. sinensis*) and Rusk citrange (*C. sinensis* x *Poncirus trifoliata*) were affected. Associated with the disease are soil-incrusted fungus strands as much as 1/4 inch thick and rhizomorphs on roots of citrus trees and on oak roots occasionally found in contact with citrus roots. The citrus trees affected are 5 years of age and are established on well-drained sandy land recently cleared of oak. Mycelial fans, frequently associated with fungus-forming rhizomorphs, were not found. A single fungus was isolated consistently from citrus roots, but neither rhizomorphs nor spores were produced in culture, and inoculation trials with the fungus isolated failed.

White Root Rot

The description of this disease agrees in many respects with white root rot caused by the fungus *Corticium galactinum*. Not only is this fungus known to be a lethal parasite of apple and many ornamental shrubs, including both coniferous and deciduous hosts, but it most commonly appears after clearing of oak stands, etc. Thick rhizomorph-like strands are found in the soil, but have not been produced by the reviewer in laboratory culture. Nor have spores been found in laboratory cultures. The fungus is known for its ability to invade woody tissue and cause rot as well as death and apparently thrives best on newly cleared land where abundant wood is available as a source for building up. Whether the fungus involved here is actually *Corticium galactinum* or some other, its menace as a root rot after cultivation of cleared land should be recognized as a serious problem, and research toward its control should be rewarding.

Elm Mosaic Virus

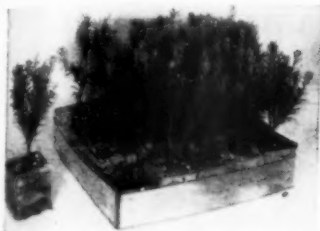
The ease with which at least one virus of shade trees can spread was one to four inches in diameter. It was

Size
1 1/4 x 1 3/4
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2 x 2
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2 1/2 x 3
3 x 3
3 1/2 x 4
4 x 4

Size
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1 1/2 x 1 3/4 x 2	2000	17 lbs.	\$5.85	\$5.50	\$5.15	\$4.90	
1 3/4 x 1 3/4 x 2 1/2	2000	18 lbs.	4.00	5.65	5.25	5.00	
2 x 2 x 2	2000	19 lbs.	4.00	5.65	5.25	5.00	
2 x 2 x 2 1/2	2000	20 lbs.	6.15	5.75	5.35	5.10	
2 x 2 x 3	2000	21 lbs.	6.70	6.30	5.90	5.60	
2 1/2 x 2 1/2 x 2 1/2	2000	22 lbs.	6.70	6.30	5.90	5.60	
2 1/2 x 2 1/2 x 3	2000	23 lbs.	7.15	6.70	6.25	5.95	
3 x 3 x 3	1000	33 lbs.	7.45	7.00	6.50	6.20	
3 x 3 x 4	1000	45 lbs.	7.80	7.30	6.85	6.50	
4 x 4 x 3	1000	45 lbs.	7.80	7.30	6.85	6.50	
4 x 4 x 4	1000	48 lbs.	8.85	8.30	7.75	7.40	

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Size	Dimensions	Units of	Wt. per 1000	Prices per 1000 as shown below			
				0 to 1000	1000 to 2375	2375 and up	
No. 1-R (holds 12 1 3/4 x 2 1/2 bands)		125	88 lbs.	\$46.30	\$44.20	\$42.30	
No. 2-R (holds 12 2 x 2 1/2 bands)		125	104 lbs.	49.40	47.20	45.20	
No. 3-X (holds 12 2 x 2 1/2 bands)		125	240 lbs.	62.90	59.20	55.50	
No. 4-X (holds 12 3 x 3 bands)		125	288 lbs.	69.70	65.60	61.50	
No. 1-S (holds 25 1 3/4 x 2 bands)		125	320 lbs.	76.50	72.00	67.50	
No. 2-S (holds 25 2 x 2 bands)		125	160 lbs.	55.20	53.00	47.80	
No. 3-SX (holds 25 2 x 2 bands)		125	216 lbs.	60.80	56.90	52.70	
		125	400 lbs.	96.95	93.95	87.95	

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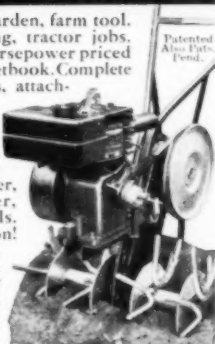
reported by L. C. Kemper, of the University of Wisconsin, Madison, Wis. Elm mosaic virus, which causes a relatively harmless mosaic disease of elm leaves, was transmitted from diseased to healthy trees through both pollen and pistils. Found to be present in pollen from an infected tree, the virus was successfully transmitted to more than 450 seedlings, resulting from crosses with virus-infected pollen and virus-free pistils. None of 336 seedlings obtained from healthy parents was infected with the virus. Three of four seedlings obtained from virus-infected pistils and virus-free pollen were also infected by the elm mosaic virus.

Although some of the infected seedlings expressed symptoms, others did not, illustrating the well-known phenomenon of the symptomless carrier. That elm mosaic is of little significance as an elm disease is unimportant, compared with the knowledge that any virus can be so easily transmitted and so difficult to detect. This is further illustrated by inoculation of prunus species with the elm mosaic virus.

L. K. Callahan and J. D. Moore, of the University of Wisconsin, found 17 species and varieties of prunus susceptible to the virus. The extent to which viruses may lurk un-

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detected in nonaffected tree species as indicated here is indicative of their serious nature.

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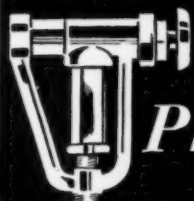
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experiment reported by Drs. C. H. Beckman and F. L. Howard, of the University of Rhode Island, Kingston, R. I., the chemical was dry-packed into bore holes in tree trunks



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applied when buds were swelling or breaking (May 2 to 17), either once or three times at weekly intervals. In trees treated, development of springwood, including fewer and less complete rows of wood vessels, was reduced by as much as 80 per cent by June 13.

Inoculated with the Dutch elm disease fungus June 5, when springwood formation was limited, trees treated once were prevented from infection by 63 per cent, those treated three times by 100 per cent. But when reinoculated with the fungus June 20, when springwood was more developed, treated trees became infected. Once infected, treated trees developed wilt symptoms comparable to those in untreated trees. Treatment with the chemical from June 1 to 14 after considerable springwood had been formed did not prevent infection or development of symptoms after inoculation with the fungus June 20.

Inoculation Problems

In view of even temporary prevention of infection by arresting sapwood development, further work with this chemical should be of great interest. It is possible that the probability of natural infection might be reduced sufficiently during critical infection periods to warrant use of such a chemical for control.

The application of the chemical as described raises many questions. Would it be possible for the chemical to be distributed uniformly and in sufficient strength to cause the effect reported at extremities of smaller branches, where most natural infection occurs? If not, could the chemical effectively seal off infection in small branches from larger stems? Would it be possible to prevent further development of the fungus in terminally infected branches soon after detection of the disease, making possible subsequent eradication of the disease from the tree by pruning? These and many other speculations can be answered only by additional research. Drs. Beckman and Howard have demonstrated a striking phenomenon worth further investigation, but no one should be under the impression that the chemical reported here can be used without much more research.

New Oak Diseases

A new, serious and unexplained disease of scarlet, red and black oaks was described by W. H. Gillespie and R. P. True, of the University of West Virginia, Morgantown, W. Va. Similar to a condition previously reported from Pennsylvania, New

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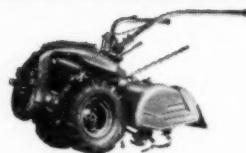
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York and New Jersey, the condition has caused extensive and substantial losses of oaks in areas affected. In addition to the serious losses of the trees themselves, the situation has made oak wilt surveys hopelessly ineffective where this condition occurs.

Observers agree that the condition does not resemble oak wilt. The oak wilt fungus has never been isolated from the trees affected, nor have any other fungi considered capable of causing the condition been isolated consistently. Several factors indicate the possibility of mortality, with drought either as a primary or a contributing factor. Apparently the trees have been dying for several years recently, indicating the absence of a sudden, virulent, lethal parasite. Three droughts have occurred in the area during the past five years. Boundaries of areas containing affected trees closely follow shale soil types, presumably of limited water-holding capacity. And cankers often associated with drought have been observed on oak and red maples in some areas affected.

Although preliminary surveys for root fungus were made and no parasites were reported, specific mention was not made of the presence or absence of root-rotting fungi. Whether primary or secondary, it appears most probable that certain types of root parasites would be active in the stands described. The known distribution host range and habit of *Armillaria mellea*, the shoe-string root-rot fungus, would appear to make almost certain its presence under the circumstances described. Although regarded by many pathologists as highly parasitic, this root fungus is also known to flourish best on trees weakened by other causes. If the trees in question have been weakened by drought as suspected, it is entirely possible that one or more secondary agents, such as root rot, could be contributing factors to the decline and mortality of the trees.

Oak Wilt on Apples

According to Dr. G. J. Bart, of Ohio State University, Columbus, O., several non-oak species of trees previously unreported may be susceptible, to some degree, to oak wilt. Of nine species reported susceptible, only apple developed symptoms similar to oak wilt. Evidence of susceptibility of Jonathan and Delicious apple trees began with initial leaf discoloration, curling and defoliation 14 days after inoculation with the fungus, the infection killing some of the trees tested. Discoloration of sapwood occurred in both species of apple. All symptoms and

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ultimate death developed more quickly in Jonathan than in Delicious apple trees, and the oak wilt fungus was isolated from root and stem tips of Jonathan trees a year after inoculation.

Fungus Spreads

Dr. Bart found that the fungus was able to survive and spread to a limited degree in ash, birch, dogwood, hop hornbeam, hickory, sassafras, sourwood and wild cherry. In sassafras the fungus caused severe discoloration of the sapwood, extending five feet from the point of inoculation, and was recovered at a distance of three feet from the point of introduction after two years and eight months. In most of the tree species in which the fungus was able to survive, it was unable to spread beyond 15 inches from point of inoculation. There was no evidence of susceptibility to the fungus to any degree in aspen, blue beech, elm, locust, maple or walnut.

Dr. Bart's report on apple is significant in that it is the first species indicating genuine susceptibility outside the oak-beech family. Extensive testing and duplication of the susceptibility of apple reported will be necessary over an extended period of years before these results can be confirmed fully. Even if confirmed, the genuine susceptibility of apple to oak wilt would not necessarily be indicative that apple trees could be naturally infected, although such a possibility would have to be considered.

Pin Oak Infection

Natural infection of northern pin oaks by the oak wilt fungus following trunk wounding, particularly during development of springwood vessels and leaf expansion, was reported by Drs. J. E. Kuntz and C. R. Drake, of the University of Wisconsin, Madison, Wis. After removal of inferior sprouts or pruning during woodland improvement, of cuttings made in May or June, 19 to 23 per cent of remaining stems affected became diseased. Wound surface inoculations were successful up to four days after wounding, but natural infections occurred only within 24 hours of wounding. Wounds painted with asphalt roofing compound or house paint immediately after wounding failed to become infected, though 32 per cent of wounded but untreated controls became diseased.

The association of wounding with natural infection of oaks during springwood development indicates the importance of restricting necessary woodland operations involving wounding to periods other than dur-

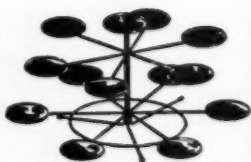
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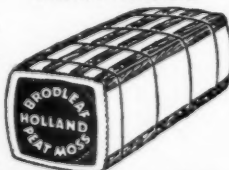
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Weight per 100
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Regular Weight Price
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Heavy Weight Price
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Weight per 100
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Bottom 6½ ins.
High . . . 9 ins.
Weight per 100
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ing the growing season. Since natural infection appears to occur relatively soon after wounding, wounds should be protected by painting immediately after being made.

Antibiotics and Oak Wilt

W. R. Phelps and colleagues, of the University of Wisconsin, reported delay in expression of oak wilt symptoms by treatment of oaks with three antibiotics. Actidione (cyclohexamide), the acetate derivative of actidione and oligomycin delayed symptom expression two months beyond that of untreated controls. However, actidione and its derivative were toxic to the trees. Oligomycin was effective in delaying symptoms to the degree that it was applied. Heavier treatments resulted in greater delay of symptoms. Inoculations with the oak wilt fungus closest to sites of oligomycin application resulted in less infection than inoculations at sites on the trees farther removed.

It is clear from this and other ex-

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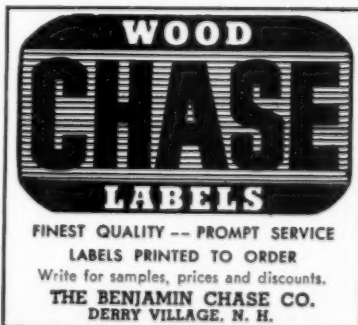


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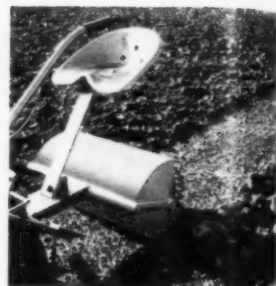
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periments reported that the major problem involving chemical treatment in tree pathology, whether it be prevention of infection or influence on the diseased tree after infection, is one concerning distribution of the chemical. Wholly unrelated to the circulation system in the human body, the sapstream system in a tree does not allow either retention of introduced chemicals for any appreciable time or for uniform distribution to all parts of the sapstream system.

ENTRANCE PLANTINGS

[Continued from page 9]

area retains ice for longer periods of time than the other walks and entrances, and one can fall just as hard at the rear of the home as any other place. A railing is doubly important to the person who enters or leaves an entrance with a heavy or awkward load under one arm.

Fragrant Plantings

Pleasant odors seem to belong near a home's back entrance, and there are many fragrant plants from which to choose. Shrubs that can be planted on either side of the door include *Lonicera thibetica*, such mock oranges as *Philadelphus lemoinei*, *P. microphyllus*, *P. pekinensis* and *P. virginialis* Virginal, *Rhododendron* (*Azalea*) *arborescens*, *Azalea rosea*, *Azalea viscosa*, *Viburnum burkwoodi*, *Viburnum juddi* and *Viburnum carlesii*. Larger-growing fragrant shrubs that could be planted at some distance are the French lilacs and other lilacs like *Syringa pubescens* and the Persian types; Chinese, Japanese and vernal witch hazels; sweet mock orange (*Philadelphus corona-*

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No. 4-X (9 1/2 x 12 1/2 x 2 1/2 ins.)
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No. 1-SX (9 1/2 x 9 1/2 x 2 1/2 ins.)
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No. 2-SX (10 1/2 x 10 1/2 x 2 1/2 ins.)
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rius); *Lonicera syringantha*; *Calycanthus floridus*; *Fothergilla major*, and *Clethra alnifolia* and its pink variety. Small trees with pleasant odors for the immediate vicinity are *Albizia julibrissin rosea*; *Chionanthus virginicus*; *Clethra barbinervis* (tree clethra); *Magnolia denudata*, *Kobus, sieboldi, stellata* and *virginiana*; tea crab apple (*Malus ioensis fimbriata*), and Bechtel and Arnold crab apples. The Amanogawa cherry is useful, also, as are the fragrant snowbell (*Styrax obassia*) and Japanese snowbell (*S. japonica*).

Where flower beds are being planned near the back door, it is a good idea for the landscape man to learn when the owners will be at home during the summer period. This bit of reasoning is important regarding flowers anywhere on the property. Why plan a flower garden for July or August when the owners are generally at their beach home during these months?

Tall Plants

The idea that shrubs of a low nature are always used at an entrance is not true, as may be seen in illustration A. In this case it was necessary to get a tall-growing plant to hold one's attention at the door. A sweet bay magnolia (*Magnolia virginiana*) suited the situation with its multiple smooth-barked stems, fragrant June flowers and clean, glossy, light green leaves with silvery backs. This magnolia does not present a solid mass, but an open, interesting structure that graces the area rather than dominates it. Other multiple-stemmed trees which could be used are shadblow, or shadbush; Scheidecker crab apple, and Franklin tree. A sourwood or lily of the valley tree (*Oxydendrum arboreum*) might also be appropriate.

Planting pockets can be left near a back door instead of filling the spaces with poured concrete. It does not take much soil space to grow an espaliered plant, as may be seen in illustration B, where an espaliered evergreen euonymus (*Euonymus japonicus*) has been grown against the wall. Many plants can be grown in a small pocket, even if it is in deep shade. Yews, convex-leaved holly, cotoneasters and many other plants can be effectively trained in espalier form.

Window Boxes

A window box is in place near the side or back entrance, and in some cases it is much in keeping under front windows. Illustration B shows that a simple window box with geraniums and ivy can be attractive and appropriate. In this case the window

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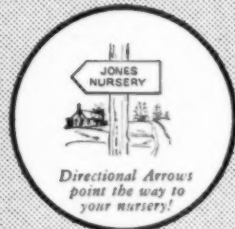
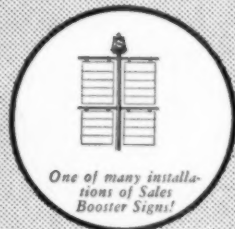


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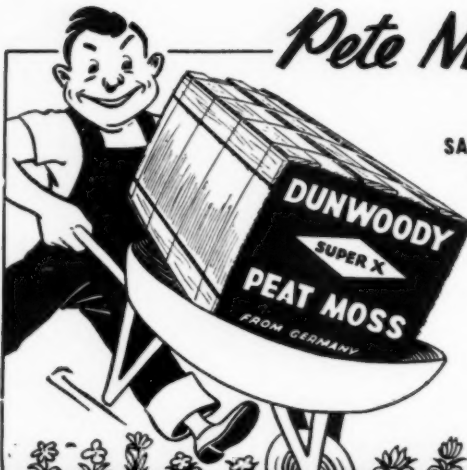
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is near a back entrance. A box filled with colorful geraniums is appealing, particularly when some of the surrounding plants are rich green, like the yew and euonymus shown in illustration B. There is an indoor planting just inside the window of the home illustrated, and both plantings (outdoor and indoor) are nicely tied together by the use of plants that have similar leaf appearances. It is a means of tying the indoors to the outdoors, even though the bottom of the window is nearly four feet above the ground level.

Some rear entrances are completely different from those in illustrations A and B. Illustration C presents a doorway that is a passageway between a more public front area and the rear, or more private, part of the property. There is a contrasting variety of plants that includes day lilies, wistarias and junipers. Ordinarily one would not consider the idea of using day lilies against the house, but it often gives a more field-grown feeling than that realized from the prim plantings many are accustomed to. It all depends upon who the client is, what he likes and the type of house and area. The willingness of a person to buy something worthwhile also has its influence. Shrubs can be mixed with herbaceous material, particularly when the adjacent land is undeveloped. Rural homes of the type in illustration C are receptive to almost a weedy appearance rather than formal or barbered plantings in contrast to the surroundings.

Intimate Garden

A flower garden as part of the back door is not amiss, either. A small fence enclosure can be incorporated to give the feeling of intimacy and of a garden very much a part of the home. One can plan a gate at the edge of the small flower garden, to open into a spacious green lawn, with trees in the near distance. A small herb or vegetable garden can also be made a part of the kitchen door. Flowers, vegetables and herbs can all be in the same garden, and such herblike shrubs as lavender and teucrium might also be a part of the plan. This combination is reminiscent of the gardens planted by our colonial ancestors.

Imagination plays a valuable role if given the opportunity. All it needs is an expression in plants in an artistic and practical arrangement. Such design elements as brick, flagstone, fences, gates, etc., can be supplementary in telling the story of living in the garden, whether it be at the front or the back door.

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NEW CHRYSANTHEMUMS FOR THE NORTH

Three new garden chrysanthemums adapted to northern climates have been developed by the University of Minnesota horticulture department and are being introduced to the public in 1957. They are Minnpink, Minnbronze and Golden Fantasy.

Minnpink and Minnbronze are low-growing, cushion-type chrysanthemums which were developed to meet the increasing demand for low-growing ornamental plants. The third, Golden Fantasy, has an entirely new type of flower which has not been seen before in chrysanthemums.

The clean rich foliage of Golden Fantasy is topped by 2-inch golden-yellow flowers. The bloom is double, with tubular petals which are both flared and forked at the tips, giving it a unique fringed effect. A sturdy plant of medium height (approximately 18 inches high and 15 to 18 inches wide) Golden Fantasy should be used in the midsection of the flower border or as a feature plant because of its bright golden color. Blooming starts in early September and continues until killing frost.

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spreads to a width of two feet or more and grows 12 inches high in full sun. Blooming begins about mid-August, reaches a peak in September and continues until hard frost. Foliage is completely hidden by the mass of double rose-pink blooms averaging one and one-half to two inches in diameter.

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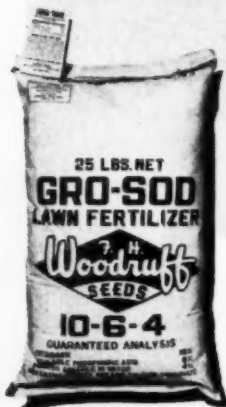
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to a height of nine to 12 inches and spread to 12 to 16 inches.

Because of its extremely low growth habit, Minnbronze should be planted only on the front edge of flower borders. Minnpink may be used as an edging plant or near the front of the flower border. Both varieties may be grown in front of shrubs in foundation plantings and used in planter or window boxes.

The prefix "Minn" is being used to designate garden chrysanthemums of low growth habit introduced by the University of Minnesota.

These new cushion varieties possess many of the favorable characteristics of other University of Minnesota varieties, such as earliness of bloom and ability to withstand unfavorable weather conditions, making them well adapted to growing conditions in the upper midwest.

Plants will be available this spring according to information given in a news release from the University of Minnesota.

A LIVING REMINDER

Frank P. Wilhelm, of the Hillside Iris Gardens, Route 2, St. Joseph, Mo., and a Norway spruce were the subjects of an illustrated article in the December 16 issue of the St. Joseph, Mo., News-Press. In December, 1926, Mr. Wilhelm and his wife purchased from a local nurseryman an 18-inch Norway spruce in a wooden candy bucket and decorated it for their recently born son. As the tree started dropping needles between Christmas and New Year's day, Mr. Wilhelm went out in a foot of snow, dug to a depth of six inches in the frozen soil and planted the tree. The spruce thrived and is now a 26-foot specimen, towering above the Wilhelms' home as a living reminder of their 30-year-old son and his first Christmas.

DEALER AID

C. R. Burr & Co., Manchester, Conn., is offering dealers free plans for a dual-purpose display rack, which may be built with simple tools from stock lumber sizes.

The rack is designed to hold 64 of the company's packaged roses in a top section and an equal number in a reserve space below. When the roses are sold, the upper part of the rack may be removed, and perennial flats displayed on the waist-high lower section.

TOM W. WILKENS has organized the Ridge Landscape Service, at 2189 Walter road, Westlake, O.

OFFERING QUALITY SHRUBS IN GOOD QUANTITY

	Price		Price
Spirea Blue Mist	Per 1000	Clavey's Honeysuckle	Per 1000
No. 1	\$300.00	2 to 2½ ft.	\$650.00
Medium	220.00		
Barberry, Thunbergi		Zabeli Honeysuckle	
2 to 2½ ft.	450.00	2 to 3 ft.	450.00
Japanese Quince		Prunus Triloba (Shrub)	
2 to 3 ft.	450.00	2 to 3 ft.	700.00
18 to 24 ins.	350.00	Spirea Japonica Coccinea	
		12 to 15 ins.	350.00
Deutzia, Lemoine		Spirea Billardi	
2 to 2½ ft.	550.00	18 to 24 ins.	350.00
18 to 24 ins.	450.00	Spirea Froebeli	
Euonymus Radicans Erecta		2 to 2½ ft.	450.00
15 to 18 ins.	600.00	18 to 24 ins.	350.00
Hydrangea A.G.		Regel Privet	
18 to 24 ins.	450.00	2 to 3 ft.	450.00
12 to 18 ins.	250.00	18 to 24 ins.	350.00
		12 to 18 ins.	220.00

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12 ins.	\$0.50
15 ins.	.60
18 ins.	.70
24 ins.	.85
30 ins.	1.00

- Berryer**—double, clear mauve, 12 ins., 15 ins., 18 ins., 24 ins.
Chas. Joly—double, dark red, 12 ins., 15 ins., 18 ins.
Ellen Willmott—double, creamy-white, 12 ins., 15 ins., 18 ins.
Gen. Sheridan—double, white, 18 ins., 24 ins., 30 ins.
Jacques Callot—single, rose-lavender, 12 ins., 15 ins., 18 ins.
Leon Gambetta—double, bright rosy-lilac, 12 ins., 15 ins., 18 ins., 24 ins.
Lucie Baltet—single, pink, 12 ins.
Ludwig Spaeth—single, deep red, 12 ins., 15 ins., 18 ins.
Mme. Florent Stepman—single, white, 15 ins., 18 ins., 24 ins.
Marechal Lannes—double, violet-blue, 12 ins., 15 ins., 18 ins.
Pres. Grevy—double, soft blue, 12 ins., 15 ins., 18 ins.
Pres. Lincoln—single, true blue, 12 ins.
Pres. Theo. Roosevelt—single, red, 15 ins., 18 ins.
Thomas Jefferson—single, violet, 12 ins., 15 ins., 18 ins.
Thunberg—double, mauve, 12 ins., 15 ins., 18 ins.

XXX, B&B—Full, heavy plants.

Decaisne—single, large azure-blue.

1½ ft., \$1.75; 2-ft., \$2.00; 2½ ft., \$2.50.

Pres. Grevy—double, soft blue.

2 ft., \$2.00; 3 ft., \$2.50.

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